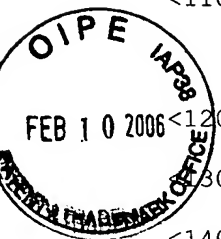


REC'D PCT/PTO 10 FEB 2006

SEQUENCE LISTING



<110> Kuja-Panula, Juha  
Kiiltomaki, Marjaana  
Rauvala, Heikki

<120> NOVEL PROTEIN AND USES THEREOF

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<140> US 10/537,102

<141> 2005-06-02

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ttg gtg cac ttg gac gag cat gcc ttc cac ggc ctg cgc gcg ctc agc	480
Leu Val His Leu Asp Glu His Ala Phe His Gly Leu Arg Ala Leu Ser	
145 150 155 160	
cat ctc tac ctg ggc tgc aac gaa ctc gcc tcg ttc tcc ttc gac cac	528
His Leu Tyr Leu Gly Cys Asn Glu Leu Ala Ser Phe Ser Phe Asp His	
165 170 175	
ctg cac ggt ctg agc gcc acc cac ctg ctt act ctg gac ctc tcc tcc	576
Leu His Gly Leu Ser Ala Thr His Leu Leu Thr Leu Asp Leu Ser Ser	
180 185 190	
aac cgg ctg gga cac atc tcc gta cct gag ctg gcc gcg ctg ccg gcc	624
Asn Arg Leu Gly His Ile Ser Val Pro Glu Leu Ala Ala Leu Pro Ala	
195 200 205	
ttc ctc aag aac ggc ctc tac ttg cac aac aac cct ttg cct tgc gac	672
Phe Leu Lys Asn Gly Leu Tyr Leu His Asn Asn Pro Leu Pro Cys Asp	

210	215	220	
tgc cgc ctc tac cac ctg cta cag cgc tgg cac cag cgg ggc ctg agc Cys Arg Leu Tyr His Leu Leu Gln Arg Trp His Gln Arg Gly Leu Ser 225 230 235 240			720
gcc gtg cgc gac ttt gcg cgc gag tac gta tgc ttg gcc ttc aag gta Ala Val Arg Asp Phe Ala Arg Glu Tyr Val Cys Leu Ala Phe Lys Val 245 250 255			768
ccc gcg tcc cgc gtg cgc ttc ttc cag cac agc cgc gtc ttt gag aac Pro Ala Ser Arg Val Arg Phe Phe Gln His Ser Arg Val Phe Glu Asn 260 265 270			816
tgc tcg tcg gcc cca gct ctt ggc cta gag cgg ccg gaa gag cac ctg Cys Ser Ser Ala Pro Ala Leu Gly Leu Glu Arg Pro Glu Glu His Leu 275 280 285			864
tac gcg ctg gtg ggt cgg tcc ctg agg ctt tac tgc aac acc agc gtc Tyr Ala Leu Val Gly Arg Ser Leu Arg Leu Tyr Cys Asn Thr Ser Val 290 295 300			912
ccg gcc atg cgc att gcc tgg gtt tcg ccg cag cag gag ctt ctc agg Pro Ala Met Arg Ile Ala Trp Val Ser Pro Gln Gln Glu Leu Leu Arg 305 310 315 320			960
gcg cca gga tcc cgc gat ggc agc atc gcg gtg ctg gcc gac ggc agc Ala Pro Gly Ser Arg Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser 325 330 335			1008
ttg gcc ata ggc aac gta cag gag cag cat gcg gga ctc ttc gtg tgc Leu Ala Ile Gly Asn Val Gln Glu Gln His Ala Gly Leu Phe Val Cys 340 345 350			1056
ctg gcc act ggg ccc cgc ctg cac cac aac cag acg cac gag tac aac Leu Ala Thr Gly Pro Arg Leu His His Asn Gln Thr His Glu Tyr Asn 355 360 365			1104
gtg agc gtg cac ttt ccg cgc cca gag ccc gag gct ttc aac aca ggc Val Ser Val His Phe Pro Arg Pro Glu Pro Glu Ala Phe Asn Thr Gly 370 375 380			1152
ttc acc aca ctg ctg ggc tgt gcc gtg ggc ctt gtg ctc gtg ctg ctc Phe Thr Thr Leu Leu Gly Cys Ala Val Gly Leu Val Leu Val Leu Leu 385 390 395 400			1200
tac ctg ttc gcc cca ccc tgc cgc tgc tgc cgc cgt gcc tgc cgc tgc Tyr Leu Phe Ala Pro Pro Cys Arg Cys Cys Arg Arg Ala Cys Arg Cys 405 410 415			1248
cgc cgc tgg ccc caa aca ccc agc ccg ctc caa gag ctg agc gca cag Arg Arg Trp Pro Gln Thr Pro Ser Pro Leu Gln Glu Leu Ser Ala Gln 420 425 430			1296
tcc tca gta ctc agc acc aca ccg cca gac gca ccc agc cgc aag gcc Ser Ser Val Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Arg Lys Ala 435 440 445			1344

agc gtc cac aag cac gta gtc ttt ctg gag cca ggc cgg agg ggc ctc 1392  
 Ser Val His Lys His Val Val Phe Leu Glu Pro Gly Arg Arg Gly Leu  
 450 455 460

aat ggc cgc gtg cag ctg gca gta gct gag gaa ttc gat ctc tac aac 1440  
 Asn Gly Arg Val Gln Leu Ala Val Ala Glu Glu Phe Asp Leu Tyr Asn  
 465 470 475 480

cct gga ggc ctg cag ctg aag gct ggc tct gag tcc gcc agc tcc ata 1488  
 Pro Gly Gly Leu Gln Leu Lys Ala Gly Ser Glu Ser Ala Ser Ser Ile  
 485 490 495

ggc tcc gag ggt ccc atg aca acc 1512  
 Gly Ser Glu Gly Pro Met Thr Thr  
 500

<210> 6  
 <211> 504  
 <212> PRT  
 <213> Homo sapiens

<400> 6  
 Met Thr Trp Leu Val Leu Leu Gly Thr Leu Leu Cys Met Leu Arg Val  
 1 5 10 15

Gly Leu Gly Thr Pro Asp Ser Glu Gly Phe Pro Pro Arg Ala Leu His  
 20 25 30

Asn Cys Pro Tyr Lys Cys Ile Cys Ala Ala Asp Leu Leu Ser Cys Thr  
 35 40 45

Gly Leu Gly Leu Gln Asp Val Pro Ala Glu Leu Pro Ala Ala Thr Ala  
 50 55 60

Asp Leu Asp Leu Ser His Asn Ala Leu Gln Arg Leu Arg Pro Gly Trp  
 65 70 75 80

Leu Ala Pro Leu Phe Gln Leu Arg Ala Leu His Leu Asp His Asn Glu  
 85 90 95

Leu Asp Ala Leu Gly Arg Gly Val Phe Val Asn Ala Ser Gly Leu Arg  
 100 105 110

Leu Leu Asp Leu Ser Ser Asn Thr Leu Arg Ala Leu Gly Arg His Asp  
 115 120 125

Leu Asp Gly Leu Gly Ala Leu Glu Lys Leu Leu Leu Phe Asn Asn Arg  
 130 135 140

Leu Val His Leu Asp Glu His Ala Phe His Gly Leu Arg Ala Leu Ser  
 145 150 155 160

His Leu Tyr Leu Gly Cys Asn Glu Leu Ala Ser Phe Ser Phe Asp His  
 165 170 175



Leu His Gly Leu Ser Ala Thr His Leu Leu Thr Leu Asp Leu Ser Ser  
 180 185 190  
 Asn Arg Leu Gly His Ile Ser Val Pro Glu Leu Ala Ala Leu Pro Ala  
 195 200 205  
 Phe Leu Lys Asn Gly Leu Tyr Leu His Asn Asn Pro Leu Pro Cys Asp  
 210 215 220  
 Cys Arg Leu Tyr His Leu Leu Gln Arg Trp His Gln Arg Gly Leu Ser  
 225 230 235 240  
 Ala Val Arg Asp Phe Ala Arg Glu Tyr Val Cys Leu Ala Phe Lys Val  
 245 250 255  
 Pro Ala Ser Arg Val Arg Phe Phe Gln His Ser Arg Val Phe Glu Asn  
 260 265 270  
 Cys Ser Ser Ala Pro Ala Leu Gly Leu Glu Arg Pro Glu Glu His Leu  
 275 280 285  
 Tyr Ala Leu Val Gly Arg Ser Leu Arg Leu Tyr Cys Asn Thr Ser Val  
 290 295 300  
 Pro Ala Met Arg Ile Ala Trp Val Ser Pro Gln Gln Glu Leu Leu Arg  
 305 310 315 320  
 Ala Pro Gly Ser Arg Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser  
 325 330 335  
 Leu Ala Ile Gly Asn Val Gln Glu Gln His Ala Gly Leu Phe Val Cys  
 340 345 350  
 Leu Ala Thr Gly Pro Arg Leu His His Asn Gln Thr His Glu Tyr Asn  
 355 360 365  
 Val Ser Val His Phe Pro Arg Pro Glu Pro Glu Ala Phe Asn Thr Gly  
 370 375 380  
 Phe Thr Thr Leu Leu Gly Cys Ala Val Gly Leu Val Leu Val Leu Leu  
 385 390 395 400  
 Tyr Leu Phe Ala Pro Pro Cys Arg Cys Cys Arg Arg Ala Cys Arg Cys  
 405 410 415  
 Arg Arg Trp Pro Gln Thr Pro Ser Pro Leu Gln Glu Leu Ser Ala Gln  
 420 425 430  
 Ser Ser Val Leu Ser Thr Thr Pro Pro Asp Ala Pro Ser Arg Lys Ala  
 435 440 445  
 Ser Val His Lys His Val Val Phe Leu Glu Pro Gly Arg Arg Gly Leu  
 450 455 460  
 Asn Gly Arg Val Gln Leu Ala Val Ala Glu Glu Phe Asp Leu Tyr Asn  
 465 470 475 480

Pro Gly Gly Leu Gln Leu Lys Ala Gly Ser Glu Ser Ala Ser Ser Ile  
485 490 495

Gly Ser Glu Gly Pro Met Thr Thr  
500

<210> 7

<211> 1827

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Ig-fusion  
protein

<220>

<221> CDS

<222> (1)..(1827)

<400> 7

atg caa ccc cag cgt gac ctg cga ggc ctc tgg ctc ctg ctg ctc tcc 48  
Met Gln Pro Gln Arg Asp Leu Arg Gly Leu Trp Leu Leu Leu Ser  
1 5 10 15

gtg ttc ctg ctt ctc ttt gag gta gcc agg gcc ggc cga tct gtg gtt 96  
Val Phe Leu Leu Leu Phe Glu Val Ala Arg Ala Gly Arg Ser Val Val  
20 25 30

agt tgt ccc gcc aac tgc ctg tgc gcc agc aac atc ctc agc tgc tcc 144  
Ser Cys Pro Ala Asn Cys Leu Cys Ala Ser Asn Ile Leu Ser Cys Ser  
35 40 45

aag cag cag ctg ccc aat gtg ccc caa tct ttg ccc agc tac aca gca 192  
Lys Gln Gln Leu Pro Asn Val Pro Gln Ser Leu Pro Ser Tyr Thr Ala  
50 55 60

ctg ctg gac ctc agc cac aac aac ttg agc agg ctg cgg gcc gag tgg 240  
Leu Leu Asp Leu Ser His Asn Asn Leu Ser Arg Leu Arg Ala Glu Trp  
65 70 75 80

acc ccc acc cgg ctg acc aac ctg cac tcc ctg ctg ctg agc cac aac 288  
Thr Pro Thr Arg Leu Thr Asn Leu His Ser Leu Leu Leu Ser His Asn  
85 90 95

cac ctg aac ttc atc tcc tcc gag gcc ttc gtc ccc gta ccc aac ctt 336  
His Leu Asn Phe Ile Ser Ser Glu Ala Phe Val Pro Val Pro Asn Leu  
100 105 110

agg tac ttg gac ctc tcc tcc aac cat ctt cac acg ctg gat gag ttc 384  
Arg Tyr Leu Asp Leu Ser Ser Asn His Leu His Thr Leu Asp Glu Phe  
115 120 125

ctg ttc agc gac ctg cag gcg ctg gaa gtg ctg ttg ctc tac aat aac 432  
Leu Phe Ser Asp Leu Gln Ala Leu Glu Val Leu Leu Leu Tyr Asn Asn  
130 135 140

cac att gtg gtg gtg gac cgg aat gcc ttt gag gac atg gcc cag ctg	480
His Ile Val Val Val Asp Arg Asn Ala Phe Glu Asp Met Ala Gln Leu	
145 150 155 160	
cag aaa ctc tac tta agc cag aat cag atc tct cgc ttt cct gtg gaa	528
Gln Lys Leu Tyr Leu Ser Gln Asn Gln Ile Ser Arg Phe Pro Val Glu	
165 170 175	
ctg atc aag gat ggg aac aaa tta ccc aaa ctg atg ctc ttg gat ctg	576
Leu Ile Lys Asp Gly Asn Lys Leu Pro Lys Leu Met Leu Leu Asp Leu	
180 185 190	
tcc tcc aac aag ctg aag aag ttg ccc ctg act gac ctg cag aaa ttg	624
Ser Ser Asn Lys Leu Lys Lys Leu Pro Leu Thr Asp Leu Gln Lys Leu	
195 200 205	
cca gcc tgg gtc aag aat ggg cta tac ctg cat aac aac ccc ttg gag	672
Pro Ala Trp Val Lys Asn Gly Leu Tyr Leu His Asn Asn Pro Leu Glu	
210 215 220	
tgc gac tgc aag ctc tac cag ctc ttt tcg cac tgg cag tac cgg cag	720
Cys Asp Cys Lys Leu Tyr Gln Leu Phe Ser His Trp Gln Tyr Arg Gln	
225 230 235 240	
ctg agc tct gtg atg gac ttc cag gag gac ctg tac tgc atg cac tcc	768
Leu Ser Ser Val Met Asp Phe Gln Glu Asp Leu Tyr Cys Met His Ser	
245 250 255	
aag aag ctg cac aac atc ttc agc ctg gat ttc ttc aat tgc agc gag	816
Lys Lys Leu His Asn Ile Phe Ser Leu Asp Phe Phe Asn Cys Ser Glu	
260 265 270	
tac aag gaa agt gcc tgg gag gct cac ctg gga gac acc ttg acc atc	864
Tyr Lys Glu Ser Ala Trp Glu Ala His Leu Gly Asp Thr Leu Thr Ile	
275 280 285	
agg tgt gac acc aaa cag caa ggc atg acc aaa gtg tgg gtg tcc cca	912
Arg Cys Asp Thr Lys Gln Gln Gly Met Thr Lys Val Trp Val Ser Pro	
290 295 300	
agc aat gaa cag gtg cta agt cag ggg tcc aat ggc tcg gtg agc gtg	960
Ser Asn Glu Gln Val Leu Ser Gln Gly Ser Asn Gly Ser Val Ser Val	
305 310 315 320	
agg aat ggc gac ctt ttt ttt aaa aag gtg cag gtc gag gat ggg ggt	1008
Arg Asn Gly Asp Leu Phe Phe Lys Lys Val Gln Val Glu Asp Gly Gly	
325 330 335	
gtg tat acc tgt tac gcc atg ggg gag act ttc aac gag aca ctg tct	1056
Val Tyr Thr Cys Tyr Ala Met Gly Glu Thr Phe Asn Glu Thr Leu Ser	
340 345 350	
gtg gag ttg aaa gtg tat aac ttc acc ttg cac gga cac cat gac acc	1104
Val Glu Leu Lys Val Tyr Asn Phe Thr Leu His Gly His His Asp Thr	
355 360 365	

ctc aac gga tcc gag gtg ctg ttc cag ggc ccc aaa tct tgt gac aaa	1152
Leu Asn Gly Ser Glu Val Leu Phe Gln Gly Pro Lys Ser Cys Asp Lys	
370 375 380	
act cac aca tgc cca ccg tgc cca gca cct gaa ctc ctg ggg gga ccg	1200
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro	
385 390 395 400	
tca gtc ttc ctc ttc ccc cca aaa ccc aag gac acc ctc atg atc tcc	1248
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser	
405 410 415	
cgg acc cct gag gtc aca tgc gtg gtg gtg gac gtg agc cac gaa gac	1296
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp	
420 425 430	
cct gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag gtg cat aat	1344
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn	
435 440 445	
gcc aag aca aag ccg cgg gag gag cag tac aac agc acg tac cgg gtg	1392
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val	
450 455 460	
gtc agc gtc ctc acc gtc ctg cac cag gac tgg ctg aat ggc aag gag	1440
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu	
465 470 475 480	
tac aag tgc aag gtc tcc aac aaa gcc ctc cca gcc ccc atc gag aaa	1488
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys	
485 490 495	
acc atc tcc aaa gcc aaa ggg cag ccc cga gaa cca cag gtg tac acc	1536
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr	
500 505 510	
ctg ccc cca tcc cgg gat gag ctg acc aag aac cag gtc agc ctg acc	1584
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr	
515 520 525	
tgc ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg gag tgg gag	1632
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu	
530 535 540	
agc aat ggg cag ccg gag aac aac tac aag acc acg cct ccc gtg ctg	1680
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu	
545 550 555 560	
gac tcc gac ggc tcc ttc ttc ctc tac agc aag ctc acc gtg gac aag	1728
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys	
565 570 575	
agc agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg atg cat gag	1776
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu	
580 585 590	
gct ctg cac aac cac tac acg cag aag agc ctc tcc ctg tct ccg ggt	1824

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly  
 595 600 605

aaa  
 Lys

1827

<210> 8  
 <211> 609  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Ig-fusion  
 protein

<400> 8  
 Met Gln Pro Gln Arg Asp Leu Arg Gly Leu Trp Leu Leu Leu Leu Ser  
 1 5 10 15  
 Val Phe Leu Leu Leu Phe Glu Val Ala Arg Ala Gly Arg Ser Val Val  
 20 25 30  
 Ser Cys Pro Ala Asn Cys Leu Cys Ala Ser Asn Ile Leu Ser Cys Ser  
 35 40 45  
 Lys Gln Gln Leu Pro Asn Val Pro Gln Ser Leu Pro Ser Tyr Thr Ala  
 50 55 60  
 Leu Leu Asp Leu Ser His Asn Asn Leu Ser Arg Leu Arg Ala Glu Trp  
 65 70 75 80  
 Thr Pro Thr Arg Leu Thr Asn Leu His Ser Leu Leu Leu Ser His Asn  
 85 90 95  
 His Leu Asn Phe Ile Ser Ser Glu Ala Phe Val Pro Val Pro Asn Leu  
 100 105 110  
 Arg Tyr Leu Asp Leu Ser Ser Asn His Leu His Thr Leu Asp Glu Phe  
 115 120 125  
 Leu Phe Ser Asp Leu Gln Ala Leu Glu Val Leu Leu Leu Tyr Asn Asn  
 130 135 140  
 His Ile Val Val Val Asp Arg Asn Ala Phe Glu Asp Met Ala Gln Leu  
 145 150 155 160  
 Gln Lys Leu Tyr Leu Ser Gln Asn Gln Ile Ser Arg Phe Pro Val Glu  
 165 170 175  
 Leu Ile Lys Asp Gly Asn Lys Leu Pro Lys Leu Met Leu Leu Asp Leu  
 180 185 190  
 Ser Ser Asn Lys Leu Lys Lys Leu Pro Leu Thr Asp Leu Gln Lys Leu  
 195 200 205  
 Pro Ala Trp Val Lys Asn Gly Leu Tyr Leu His Asn Asn Pro Leu Glu

210	215	220
Cys Asp Cys Lys Leu Tyr Gln Leu Phe Ser His Trp Gln Tyr Arg Gln		
225	230	235 240
Leu Ser Ser Val Met Asp Phe Gln Glu Asp Leu Tyr Cys Met His Ser		
	245	250 255
Lys Lys Leu His Asn Ile Phe Ser Leu Asp Phe Phe Asn Cys Ser Glu		
	260	265 270
Tyr Lys Glu Ser Ala Trp Glu Ala His Leu Gly Asp Thr Leu Thr Ile		
	275	280 285
Arg Cys Asp Thr Lys Gln Gln Gly Met Thr Lys Val Trp Val Ser Pro		
	290	295 300
Ser Asn Glu Gln Val Leu Ser Gln Gly Ser Asn Gly Ser Val Ser Val		
305	310	315 320
Arg Asn Gly Asp Leu Phe Phe Lys Lys Val Gln Val Glu Asp Gly Gly		
	325	330 335
Val Tyr Thr Cys Tyr Ala Met Gly Glu Thr Phe Asn Glu Thr Leu Ser		
	340	345 350
Val Glu Leu Lys Val Tyr Asn Phe Thr Leu His Gly His His Asp Thr		
	355	360 365
Leu Asn Gly Ser Glu Val Leu Phe Gln Gly Pro Lys Ser Cys Asp Lys		
	370	375 380
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro		
385	390	395 400
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser		
	405	410 415
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp		
	420	425 430
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn		
	435	440 445
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val		
	450	455 460
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu		
465	470	475 480
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys		
	485	490 495
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr		
	500	505 510
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr		

515		520		525											
Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu
530						535					540				
Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu
545					550					555					560
Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys
				565					570					575	
Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu
			580					585					590		
Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly
		595					600					605			

Lys

<210> 9  
 <211> 1920  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Ig-fusion protein

<220>  
 <221> CDS  
 <222> (1)..(1920)

<400> 9	
atg tcg tta agg ttc cac aca ctg ccc acc ctg cct aga gct gtc aaa	48
Met Ser Leu Arg Phe His Thr Leu Pro Thr Leu Pro Arg Ala Val Lys	
1 5 10 15	
ccg ggt tgc aga gag ctg ctg tgt ctg ttg gtg atc gca gtg atg gtg	96
Pro Gly Cys Arg Glu Leu Leu Cys Leu Leu Val Ile Ala Val Met Val	
20 25 30	
agc ccc agc gcc tca gga atg tgc ccc act gct tgc atc tgt gcc acc	144
Ser Pro Ser Ala Ser Gly Met Cys Pro Thr Ala Cys Ile Cys Ala Thr	
35 40 45	
gac att gtc agc tgc acc aac aaa aac cta tct aag gtg ccc ggg aac	192
Asp Ile Val Ser Cys Thr Asn Lys Asn Leu Ser Lys Val Pro Gly Asn	
50 55 60	
ctt ttc aga ctg att aaa aga ctg gat ctg agc tat aac aga atc gga	240
Leu Phe Arg Leu Ile Lys Arg Leu Asp Leu Ser Tyr Asn Arg Ile Gly	
65 70 75 80	
ctg ttg gat gcc gac tgg atc ccg gtg tcg ttt gtc aag ctg agc acc	288

Leu	Leu	Asp	Ala	Asp	Trp	Ile	Pro	Val	Ser	Phe	Val	Lys	Leu	Ser	Thr	
				85					90					95		
tta	att	ctt	cgc	cac	aac	aac	atc	acc	agc	atc	tcc	acg	ggc	agt	ttc	336
Leu	Ile	Leu	Arg	His	Asn	Asn	Ile	Thr	Ser	Ile	Ser	Thr	Gly	Ser	Phe	
			100					105					110			
tcc	aca	acc	cca	aat	tta	aag	tgt	ctg	gac	tta	tca	tcc	aat	agg	ctg	384
Ser	Thr	Thr	Pro	Asn	Leu	Lys	Cys	Leu	Asp	Leu	Ser	Ser	Asn	Arg	Leu	
			115				120					125				
aag	tcg	gta	aag	agt	gcc	aca	ttc	caa	gag	ctg	aag	gct	ctg	gaa	gta	432
Lys	Ser	Val	Lys	Ser	Ala	Thr	Phe	Gln	Glu	Leu	Lys	Ala	Leu	Glu	Val	
	130					135					140					
ctg	ctg	ctg	tac	aac	aac	cac	att	tcc	tat	ctg	gac	ccc	gca	gcg	ttc	480
Leu	Leu	Leu	Tyr	Asn	Asn	His	Ile	Ser	Tyr	Leu	Asp	Pro	Ala	Ala	Phe	
145					150					155					160	
ggg	ggg	ctt	tcc	cac	ttg	cag	aaa	ctc	tat	ctg	agt	ggg	aac	ttt	ctc	528
Gly	Gly	Leu	Ser	His	Leu	Gln	Lys	Leu	Tyr	Leu	Ser	Gly	Asn	Phe	Leu	
				165				170						175		
aca	cag	ttc	cct	atg	gat	ttg	tat	act	ggg	agg	ttc	aag	ctg	gct	gat	576
Thr	Gln	Phe	Pro	Met	Asp	Leu	Tyr	Thr	Gly	Arg	Phe	Lys	Leu	Ala	Asp	
			180					185					190			
ctg	aca	ttt	tta	gat	gtt	tcc	tat	aat	cga	atc	cct	tcc	ata	ccg	atg	624
Leu	Thr	Phe	Leu	Asp	Val	Ser	Tyr	Asn	Arg	Ile	Pro	Ser	Ile	Pro	Met	
		195					200					205				
cac	cat	ata	aac	tta	gtg	ccg	ggg	aga	cag	ctg	aga	ggc	atc	tac	ctt	672
His	His	Ile	Asn	Leu	Val	Pro	Gly	Arg	Gln	Leu	Arg	Gly	Ile	Tyr	Leu	
	210					215					220					
cac	ggg	aac	cca	ttt	gta	tgt	gac	tgt	tct	ctg	tac	tcg	ttg	ctg	atc	720
His	Gly	Asn	Pro	Phe	Val	Cys	Asp	Cys	Ser	Leu	Tyr	Ser	Leu	Leu	Ile	
225					230					235					240	
ttt	tgg	tac	cgt	agg	cac	ttt	agc	tcc	gtg	atg	gat	ttt	aag	aat	gac	768
Phe	Trp	Tyr	Arg	Arg	His	Phe	Ser	Ser	Val	Met	Asp	Phe	Lys	Asn	Asp	
				245				250						255		
tat	acc	tgt	cgc	ctg	tgg	tct	gac	tcc	agg	cac	tcc	cac	cag	ctg	cag	816
Tyr	Thr	Cys	Arg	Leu	Trp	Ser	Asp	Ser	Arg	His	Ser	His	Gln	Leu	Gln	
			260					265					270			
ctg	ctc	cag	gag	agc	ttt	ctg	aac	tgt	tct	tac	agc	gtt	atc	aac	ggc	864
Leu	Leu	Gln	Glu	Ser	Phe	Leu	Asn	Cys	Ser	Tyr	Ser	Val	Ile	Asn	Gly	
		275					280					285				
tcc	ttc	cac	gca	ctt	ggc	ttt	atc	cac	gag	gct	cag	gtt	ggg	gag	agg	912
Ser	Phe	His	Ala	Leu	Gly	Phe	Ile	His	Glu	Ala	Gln	Val	Gly	Glu	Arg	
	290					295					300					
gcg	atc	gtc	cac	tgt	gac	agc	aag	act	ggc	aat	gga	aat	act	gat	ttc	960
Ala	Ile	Val	His	Cys	Asp	Ser	Lys	Thr	Gly	Asn	Gly	Asn	Thr	Asp	Phe	



305	310	315	320	
atc tgg gtc ggt ccc gat aac agg ctg ctg gag cca gat aaa gac atg				1008
Ile Trp Val Gly Pro Asp Asn Arg Leu Leu Glu Pro Asp Lys Asp Met	325	330	335	
ggg aac ttt cgt gtg ttt tac aac gga agt ctg gtc ata gag aac cct				1056
Gly Asn Phe Arg Val Phe Tyr Asn Gly Ser Leu Val Ile Glu Asn Pro	340	345	350	
ggc ttt gag gac gcc ggg gta tat tct tgt atc gca atg aac agg cag				1104
Gly Phe Glu Asp Ala Gly Val Tyr Ser Cys Ile Ala Met Asn Arg Gln	355	360	365	
cgg ctg tta aac gag acg gtg gat atc atg atc aac gtg agc aat ttc				1152
Arg Leu Leu Asn Glu Thr Val Asp Ile Met Ile Asn Val Ser Asn Phe	370	375	380	
acc ata aac aga tcc cac gcc cac gag gcg gcg gcc gcg gat ccc atc				1200
Thr Ile Asn Arg Ser His Ala His Glu Ala Ala Ala Asp Pro Ile	385	390	395	400
gaa ggt cgt ggt ggt ggt ggt ggt gat ccc aaa tct tgt gac aaa cct				1248
Glu Gly Arg Gly Gly Gly Gly Gly Asp Pro Lys Ser Cys Asp Lys Pro	405	410	415	
cac aca tgc cca ccg tgc cca gca cct gaa ctc ctg ggg gga ccg tca				1296
His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser	420	425	430	
gtc ttc ctc ttc ccc cca aaa ccc aag gac acc ctc atg atc tcc cgg				1344
Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg	435	440	445	
acc cct gag gtc aca tgc gtg gtg gtg gac gtg agc cac gaa gac cct				1392
Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro	450	455	460	
gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc				1440
Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala	465	470	475	480
aag aca aag ccg cgg gag gag cag tac aac agc acg tac cgg gtg gtc				1488
Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val	485	490	495	
agc gtc ctc acc gtc ctg cac cag gac tgg ctg aat ggc aag gag tac				1536
Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr	500	505	510	
aag tgc aag gtc tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc				1584
Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr	515	520	525	
atc tcc aaa gcc aaa ggg cag ccc cga gaa cca cag gtg tac acc ctg				1632
Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu	530	535	540	

ccc cca tcc cgg gat gag ctg acc aag aac cag gtc agc ctg acc tgc	1680
Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys	
545 550 555 560	
ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg gag tgg gag agc	1728
Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser	
565 570 575	
aat ggg cag ccg gag aac aac tac aag acc acg cct ccc gtg ctg gac	1776
Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp	
580 585 590	
tcc gac ggc tcc ttc ttc ctc tac agc aag ctc acc gtg gac aag agc	1824
Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser	
595 600 605	
agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct	1872
Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala	
610 615 620	
ctg cac aac cac tac acg cag aag agc ctc tcc ctg tct ccg ggt aaa	1920
Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys	
625 630 635 640	

<210> 10

<211> 640

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Ig-fusion  
protein

<400> 10

Met Ser Leu Arg Phe His Thr Leu Pro Thr Leu Pro Arg Ala Val Lys
1 5 10 15

Pro Gly Cys Arg Glu Leu Leu Cys Leu Leu Val Ile Ala Val Met Val
20 25 30

Ser Pro Ser Ala Ser Gly Met Cys Pro Thr Ala Cys Ile Cys Ala Thr
35 40 45

Asp Ile Val Ser Cys Thr Asn Lys Asn Leu Ser Lys Val Pro Gly Asn
50 55 60

Leu Phe Arg Leu Ile Lys Arg Leu Asp Leu Ser Tyr Asn Arg Ile Gly
65 70 75 80

Leu Leu Asp Ala Asp Trp Ile Pro Val Ser Phe Val Lys Leu Ser Thr
85 90 95

Leu Ile Leu Arg His Asn Asn Ile Thr Ser Ile Ser Thr Gly Ser Phe
100 105 110

Ser Thr Thr Pro Asn Leu Lys Cys Leu Asp Leu Ser Ser Asn Arg Leu  
 115 120 125  
 Lys Ser Val Lys Ser Ala Thr Phe Gln Glu Leu Lys Ala Leu Glu Val  
 130 135 140  
 Leu Leu Leu Tyr Asn Asn His Ile Ser Tyr Leu Asp Pro Ala Ala Phe  
 145 150 155 160  
 Gly Gly Leu Ser His Leu Gln Lys Leu Tyr Leu Ser Gly Asn Phe Leu  
 165 170 175  
 Thr Gln Phe Pro Met Asp Leu Tyr Thr Gly Arg Phe Lys Leu Ala Asp  
 180 185 190  
 Leu Thr Phe Leu Asp Val Ser Tyr Asn Arg Ile Pro Ser Ile Pro Met  
 195 200 205  
 His His Ile Asn Leu Val Pro Gly Arg Gln Leu Arg Gly Ile Tyr Leu  
 210 215 220  
 His Gly Asn Pro Phe Val Cys Asp Cys Ser Leu Tyr Ser Leu Leu Ile  
 225 230 235 240  
 Phe Trp Tyr Arg Arg His Phe Ser Ser Val Met Asp Phe Lys Asn Asp  
 245 250 255  
 Tyr Thr Cys Arg Leu Trp Ser Asp Ser Arg His Ser His Gln Leu Gln  
 260 265 270  
 Leu Leu Gln Glu Ser Phe Leu Asn Cys Ser Tyr Ser Val Ile Asn Gly  
 275 280 285  
 Ser Phe His Ala Leu Gly Phe Ile His Glu Ala Gln Val Gly Glu Arg  
 290 295 300  
 Ala Ile Val His Cys Asp Ser Lys Thr Gly Asn Gly Asn Thr Asp Phe  
 305 310 315 320  
 Ile Trp Val Gly Pro Asp Asn Arg Leu Leu Glu Pro Asp Lys Asp Met  
 325 330 335  
 Gly Asn Phe Arg Val Phe Tyr Asn Gly Ser Leu Val Ile Glu Asn Pro  
 340 345 350  
 Gly Phe Glu Asp Ala Gly Val Tyr Ser Cys Ile Ala Met Asn Arg Gln  
 355 360 365  
 Arg Leu Leu Asn Glu Thr Val Asp Ile Met Ile Asn Val Ser Asn Phe  
 370 375 380  
 Thr Ile Asn Arg Ser His Ala His Glu Ala Ala Ala Ala Asp Pro Ile  
 385 390 395 400  
 Glu Gly Arg Gly Gly Gly Gly Gly Asp Pro Lys Ser Cys Asp Lys Pro  
 405 410 415

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser  
 420 425 430  
 Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg  
 435 440 445  
 Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro  
 450 455 460  
 Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala  
 465 470 475 480  
 Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val  
 485 490 495  
 Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr  
 500 505 510  
 Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr  
 515 520 525  
 Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu  
 530 535 540  
 Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys  
 545 550 555 560  
 Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser  
 565 570 575  
 Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp  
 580 585 590  
 Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser  
 595 600 605  
 Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala  
 610 615 620  
 Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 625 630 635 640

<210> 11

<211> 1887

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Ig-fusion  
protein

<220>

<221> CDS

<222> (1)..(1887)

<400> 11

atg gcc tgg cta gtg cta tca ggt ata cta cta tgc atg ttg ggt gct	48
Met Ala Trp Leu Val Leu Ser Gly Ile Leu Leu Cys Met Leu Gly Ala	
1 5 10 15	
gga ttg ggc act tca gac ttg gag gat gtt ctg cct cct gct ccc cac	96
Gly Leu Gly Thr Ser Asp Leu Glu Asp Val Leu Pro Pro Ala Pro His	
20 25 30	
aac tgc ccc gat ata tgc atc tgt gct gcc gat gtg ttg agc tgt gcg	144
Asn Cys Pro Asp Ile Cys Ile Cys Ala Ala Asp Val Leu Ser Cys Ala	
35 40 45	
ggc cgt ggg tta cag gac ttg ccg gta gca ctg cct acc act gct gca	192
Gly Arg Gly Leu Gln Asp Leu Pro Val Ala Leu Pro Thr Thr Ala Ala	
50 55 60	
gaa ctc gat ttg agc cac aac gca ctc aaa cgc ctg cac ccg ggg tgg	240
Glu Leu Asp Leu Ser His Asn Ala Leu Lys Arg Leu His Pro Gly Trp	
65 70 75 80	
tta gcg ccc ctc tcc cgg ctg cgt gcc ttg cac cta ggc tat aat aag	288
Leu Ala Pro Leu Ser Arg Leu Arg Ala Leu His Leu Gly Tyr Asn Lys	
85 90 95	
ctg gaa gtc ctg ggc cat ggt gcg ttc acc aat gcc agt ggc ctg agg	336
Leu Glu Val Leu Gly His Gly Ala Phe Thr Asn Ala Ser Gly Leu Arg	
100 105 110	
aca ctt gac ctg tcc tct aat atg tta agg atg ctc cat acc cat gac	384
Thr Leu Asp Leu Ser Ser Asn Met Leu Arg Met Leu His Thr His Asp	
115 120 125	
ctg gat ggc ctg gag gag ctg gag aag tta ctt ctg ttc aat aac agc	432
Leu Asp Gly Leu Glu Glu Leu Glu Lys Leu Leu Leu Phe Asn Asn Ser	
130 135 140	
ctg atg cac ttg gac ctg gat gcc ttc cag ggc ctg cgc atg ctt agc	480
Leu Met His Leu Asp Leu Asp Ala Phe Gln Gly Leu Arg Met Leu Ser	
145 150 155 160	
cac ctc tat ctc agc tgc aac gag ctc tcc tct ttc tct ttc aac cac	528
His Leu Tyr Leu Ser Cys Asn Glu Leu Ser Ser Phe Ser Phe Asn His	
165 170 175	
ttg cac ggt ctg ggg tta acc cgc ctg cgg act ctg gac ctc tcc tcc	576
Leu His Gly Leu Gly Leu Thr Arg Leu Arg Thr Leu Asp Leu Ser Ser	
180 185 190	
aac tgg ctg aaa cat atc tcc atc cct gag ttg gct gca ctg cca act	624
Asn Trp Leu Lys His Ile Ser Ile Pro Glu Leu Ala Ala Leu Pro Thr	
195 200 205	
tat ctc aag aac agg ctc tac ctg cac aac aac ccg ctg ccc tgt gac	672
Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn Asn Pro Leu Pro Cys Asp	
210 215 220	

tgc agc ctc tac cac ctg ctc cgg cgc tgg cac cag cgg ggc ctg agt	720
Cys Ser Leu Tyr His Leu Leu Arg Arg Trp His Gln Arg Gly Leu Ser	
225 230 235 240	
gcc ctg cat gat ttt gaa cgc gag tac aca tgc ttg gtc ttt aag gtg	768
Ala Leu His Asp Phe Glu Arg Glu Tyr Thr Cys Leu Val Phe Lys Val	
245 250 255	
tca gag tcc cga gtg cgc ttt ttt gag cac agc cgg gtc ttc aag aac	816
Ser Glu Ser Arg Val Arg Phe Phe Glu His Ser Arg Val Phe Lys Asn	
260 265 270	
tgc tct gtg gct gca gct cca ggc tta gag ctg cct gaa gag cag ctg	864
Cys Ser Val Ala Ala Ala Pro Gly Leu Glu Leu Pro Glu Glu Gln Leu	
275 280 285	
cac gcg cag gtg ggc cag tcc ctg agg ctc ttc tgc aac acc agt gtg	912
His Ala Gln Val Gly Gln Ser Leu Arg Leu Phe Cys Asn Thr Ser Val	
290 295 300	
cct gcc act cgg gtg gcc tgg gtc tcc ccg aag aat gag ctg ctt gtg	960
Pro Ala Thr Arg Val Ala Trp Val Ser Pro Lys Asn Glu Leu Leu Val	
305 310 315 320	
gcg cca gcc tct cag gat ggt agc atc gct gtg ttg gct gat ggc agc	1008
Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser	
325 330 335	
tta gcc ata ggc agg gtg caa gag cag cac gca ggc gtc ttt gtg tgc	1056
Leu Ala Ile Gly Arg Val Gln Glu Gln His Ala Gly Val Phe Val Cys	
340 345 350	
ctg gcc agt ggg ccc cgc ctg cac cac aac cag aca ctt gag tac aat	1104
Leu Ala Ser Gly Pro Arg Leu His His Asn Gln Thr Leu Glu Tyr Asn	
355 360 365	
gtg agt gtg caa aag gct cgc ccc gag cca gag act ttc aac aca gcg	1152
Val Ser Val Gln Lys Ala Arg Pro Glu Pro Glu Thr Phe Asn Thr Ala	
370 375 380	
gcc gcg gat ccc atc gaa ggt cgt ggt ggt ggt ggt ggt gat ccc aaa	1200
Ala Ala Asp Pro Ile Glu Gly Arg Gly Gly Gly Gly Gly Asp Pro Lys	
385 390 395 400	
tct tgt gac aaa cct cac aca tgc cca ccg tgc cca gca cct gaa ctc	1248
Ser Cys Asp Lys Pro His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu	
405 410 415	
ctg ggg gga ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac acc	1296
Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr	
420 425 430	
ctc atg atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg gac gtg	1344
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val	
435 440 445	
agc cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc gtg	1392

Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	
450						455					460					
gag	gtg	cat	aat	gcc	aag	aca	aag	ccg	cgg	gag	gag	cag	tac	aac	agc	1440
Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	
465					470					475					480	
acg	tac	cgg	gtg	gtc	agc	gtc	ctc	acc	gtc	ctg	cac	cag	gac	tgg	ctg	1488
Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	
				485					490					495		
aat	ggc	aag	gag	tac	aag	tgc	aag	gtc	tcc	aac	aaa	gcc	ctc	cca	gcc	1536
Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	
			500					505					510			
ccc	atc	gag	aaa	acc	atc	tcc	aaa	gcc	aaa	ggg	cag	ccc	cga	gaa	cca	1584
Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	
		515					520					525				
cag	gtg	tac	acc	ctg	ccc	cca	tcc	cgg	gat	gag	ctg	acc	aag	aac	cag	1632
Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	
		530				535					540					
gtc	agc	ctg	acc	tgc	ctg	gtc	aaa	ggc	ttc	tat	ccc	agc	gac	atc	gcc	1680
Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	
545					550					555					560	
gtg	gag	tgg	gag	agc	aat	ggg	cag	ccg	gag	aac	aac	tac	aag	acc	acg	1728
Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	
				565					570					575		
cct	ccc	gtg	ctg	gac	tcc	gac	ggc	tcc	ttc	ttc	ctc	tac	agc	aag	ctc	1776
Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	
			580					585					590			
acc	gtg	gac	aag	agc	agg	tgg	cag	cag	ggg	aac	gtc	ttc	tca	tgc	tcc	1824
Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	
		595					600					605				
gtg	atg	cat	gag	gct	ctg	cac	aac	cac	tac	acg	cag	aag	agc	ctc	tcc	1872
Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	
	610					615					620					
ctg	tct	ccg	ggt	aaa												1887
Leu	Ser	Pro	Gly	Lys												
625																

<210> 12

<211> 629

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Ig-fusion protein

<400> 12

Met	Ala	Trp	Leu	Val	Leu	Ser	Gly	Ile	Leu	Leu	Cys	Met	Leu	Gly	Ala	
1				5					10					15		
Gly	Leu	Gly	Thr	Ser	Asp	Leu	Glu	Asp	Val	Leu	Pro	Pro	Ala	Pro	His	
			20					25					30			
Asn	Cys	Pro	Asp	Ile	Cys	Ile	Cys	Ala	Ala	Asp	Val	Leu	Ser	Cys	Ala	
		35					40					45				
Gly	Arg	Gly	Leu	Gln	Asp	Leu	Pro	Val	Ala	Leu	Pro	Thr	Thr	Ala	Ala	
	50					55					60					
Glu	Leu	Asp	Leu	Ser	His	Asn	Ala	Leu	Lys	Arg	Leu	His	Pro	Gly	Trp	
65					70					75					80	
Leu	Ala	Pro	Leu	Ser	Arg	Leu	Arg	Ala	Leu	His	Leu	Gly	Tyr	Asn	Lys	
				85					90					95		
Leu	Glu	Val	Leu	Gly	His	Gly	Ala	Phe	Thr	Asn	Ala	Ser	Gly	Leu	Arg	
			100					105					110			
Thr	Leu	Asp	Leu	Ser	Ser	Asn	Met	Leu	Arg	Met	Leu	His	Thr	His	Asp	
		115					120					125				
Leu	Asp	Gly	Leu	Glu	Glu	Leu	Glu	Lys	Leu	Leu	Leu	Phe	Asn	Asn	Ser	
	130					135					140					
Leu	Met	His	Leu	Asp	Leu	Asp	Ala	Phe	Gln	Gly	Leu	Arg	Met	Leu	Ser	
145					150					155					160	
His	Leu	Tyr	Leu	Ser	Cys	Asn	Glu	Leu	Ser	Ser	Phe	Ser	Phe	Asn	His	
				165					170					175		
Leu	His	Gly	Leu	Gly	Leu	Thr	Arg	Leu	Arg	Thr	Leu	Asp	Leu	Ser	Ser	
			180					185					190			
Asn	Trp	Leu	Lys	His	Ile	Ser	Ile	Pro	Glu	Leu	Ala	Ala	Leu	Pro	Thr	
		195					200					205				
Tyr	Leu	Lys	Asn	Arg	Leu	Tyr	Leu	His	Asn	Asn	Pro	Leu	Pro	Cys	Asp	
	210					215					220					
Cys	Ser	Leu	Tyr	His	Leu	Leu	Arg	Arg	Trp	His	Gln	Arg	Gly	Leu	Ser	
225					230					235					240	
Ala	Leu	His	Asp	Phe	Glu	Arg	Glu	Tyr	Thr	Cys	Leu	Val	Phe	Lys	Val	
				245					250					255		
Ser	Glu	Ser	Arg	Val	Arg	Phe	Phe	Glu	His	Ser	Arg	Val	Phe	Lys	Asn	
			260					265					270			
Cys	Ser	Val	Ala	Ala	Ala	Pro	Gly	Leu	Glu	Leu	Pro	Glu	Glu	Gln	Leu	
		275					280					285				
His	Ala	Gln	Val	Gly	Gln	Ser	Leu	Arg	Leu	Phe	Cys	Asn	Thr	Ser	Val	
	290					295					300					



Pro Ala Thr Arg Val Ala Trp Val Ser Pro Lys Asn Glu Leu Leu Val  
 305 310 315 320  
 Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser  
 325 330 335  
 Leu Ala Ile Gly Arg Val Gln Glu Gln His Ala Gly Val Phe Val Cys  
 340 345 350  
 Leu Ala Ser Gly Pro Arg Leu His His Asn Gln Thr Leu Glu Tyr Asn  
 355 360 365  
 Val Ser Val Gln Lys Ala Arg Pro Glu Pro Glu Thr Phe Asn Thr Ala  
 370 375 380  
 Ala Ala Asp Pro Ile Glu Gly Arg Gly Gly Gly Gly Gly Asp Pro Lys  
 385 390 395 400  
 Ser Cys Asp Lys Pro His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu  
 405 410 415  
 Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr  
 420 425 430  
 Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val  
 435 440 445  
 Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val  
 450 455 460  
 Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser  
 465 470 475 480  
 Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu  
 485 490 495  
 Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala  
 500 505 510  
 Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro  
 515 520 525  
 Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln  
 530 535 540  
 Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala  
 545 550 555 560  
 Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr  
 565 570 575  
 Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu  
 580 585 590  
 Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser  
 595 600 605

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser  
610 615 620

Leu Ser Pro Gly Lys  
625

<210> 13  
<211> 1476  
<212> DNA  
<213> Mus musculus

<220>  
<221> CDS  
<222> (1)..(1476)

<400> 13  
atg caa ccc cag cgt gac ctg cga ggc ctc tgg ctc ctg ctg ctc tcc 48  
Met Gln Pro Gln Arg Asp Leu Arg Gly Leu Trp Leu Leu Leu Leu Ser  
1 5 10 15  
gtg ttc ctg ctt ctc ttt gag gta gcc agg gcc ggc cga tct gtg gtt 96  
Val Phe Leu Leu Phe Glu Val Ala Arg Ala Gly Arg Ser Val Val  
20 25 30  
agt tgt ccc gcc aac tgc ctg tgc gcc agc aac atc ctc agc tgc tcc 144  
Ser Cys Pro Ala Asn Cys Leu Cys Ala Ser Asn Ile Leu Ser Cys Ser  
35 40 45  
aag cag cag ctg ccc aat gtg ccc caa tct ttg ccc agc tac aca gca 192  
Lys Gln Gln Leu Pro Asn Val Pro Gln Ser Leu Pro Ser Tyr Thr Ala  
50 55 60  
ctg ctg gac ctc agc cac aac aac ttg agc agg ctg cgg gcc gag tgg 240  
Leu Leu Asp Leu Ser His Asn Asn Leu Ser Arg Leu Arg Ala Glu Trp  
65 70 75 80  
acc ccc acc cgg ctg acc aac ctg cac tcc ctg ctg ctg agc cac aac 288  
Thr Pro Thr Arg Leu Thr Asn Leu His Ser Leu Leu Leu Ser His Asn  
85 90 95  
cac ctg aac ttc atc tcc tcc gag gcc ttc gtc ccc gta ccc aac ctt 336  
His Leu Asn Phe Ile Ser Ser Glu Ala Phe Val Pro Val Pro Asn Leu  
100 105 110  
agg tac ttg gac ctc tcc tcc aac cat ctt cac acg ctg gat gag ttc 384  
Arg Tyr Leu Asp Leu Ser Ser Asn His Leu His Thr Leu Asp Glu Phe  
115 120 125  
ctg ttc agc gac ctg cag gcg ctg gaa gtg ctg ttg ctc tac aat aac 432  
Leu Phe Ser Asp Leu Gln Ala Leu Glu Val Leu Leu Leu Tyr Asn Asn  
130 135 140  
cac att gtg gtg gtg gac cgg aat gcc ttt gag gac atg gcc cag ctg 480  
His Ile Val Val Val Asp Arg Asn Ala Phe Glu Asp Met Ala Gln Leu

145	150	155	160	
cag aaa ctc tac tta agc cag aat cag atc tct cgc ttt cct gtg gaa				528
Gln Lys Leu Tyr	Leu Ser Gln Asn Gln	Ile Ser Arg Phe	Pro Val Glu	
	165	170	175	
ctg atc aag gat ggg aac aaa tta ccc aaa ctg atg ctc ttg gat ctg				576
Leu Ile Lys	Asp Gly Asn Lys Leu	Pro Lys Leu Met Leu	Leu Asp Leu	
	180	185	190	
tcc tcc aac aag ctg aag aag ttg ccc ctg act gac ctg cag aaa ttg				624
Ser Ser Asn Lys Leu Lys Lys Leu	Pro Leu Thr Asp Leu	Gln Lys Leu		
	195	200	205	
cca gcc tgg gtc aag aat ggg cta tac ctg cat aac aac ccc ttg gag				672
Pro Ala Trp Val Lys Asn Gly Leu Tyr Leu His Asn Asn Pro Leu Glu				
	210	215	220	
tgc gac tgc aag ctc tac cag ctc ttt tcg cac tgg cag tac cgg cag				720
Cys Asp Cys Lys Leu Tyr Gln Leu Phe Ser His Trp Gln Tyr Arg Gln				
	225	230	235	240
ctg agc tct gtg atg gac ttc cag gag gac ctg tac tgc atg cac tcc				768
Leu Ser Ser Val Met Asp Phe Gln Glu Asp Leu Tyr Cys Met His Ser				
	245	250	255	
aag aag ctg cac aac atc ttc agc ctg gat ttc ttc aat tgc agc gag				816
Lys Lys Leu His Asn Ile Phe Ser Leu Asp Phe Phe Asn Cys Ser Glu				
	260	265	270	
tac aag gaa agt gcc tgg gag gct cac ctg gga gac acc ttg acc atc				864
Tyr Lys Glu Ser Ala Trp Glu Ala His Leu Gly Asp Thr Leu Thr Ile				
	275	280	285	
agg tgt gac acc aaa cag caa ggc atg acc aaa gtg tgg gtg tcc cca				912
Arg Cys Asp Thr Lys Gln Gln Gly Met Thr Lys Val Trp Val Ser Pro				
	290	295	300	
agc aat gaa cag gtg cta agt cag ggg tcc aat ggc tcg gtg agc gtg				960
Ser Asn Glu Gln Val Leu Ser Gln Gly Ser Asn Gly Ser Val Ser Val				
	305	310	315	320
agg aat ggc gac ctt ttt ttt aaa aag gtg cag gtc gag gat ggg ggt				1008
Arg Asn Gly Asp Leu Phe Phe Lys Lys Val Gln Val Glu Asp Gly Gly				
	325	330	335	
gtg tat acc tgt tac gcc atg ggg gag act ttc aac gag aca ctg tct				1056
Val Tyr Thr Cys Tyr Ala Met Gly Glu Thr Phe Asn Glu Thr Leu Ser				
	340	345	350	
gtg gag ttg aaa gtg tat aac ttc acc ttg cac gga cac cat gac acc				1104
Val Glu Leu Lys Val Tyr Asn Phe Thr Leu His Gly His His Asp Thr				
	355	360	365	
ctc aac aca gcc tac act acc ctg gtg ggc tgt atc ctc agt gtg gtt				1152
Leu Asn Thr Ala Tyr Thr Thr Leu Val Gly Cys Ile Leu Ser Val Val				
	370	375	380	

ctg gtc ctc ata tac ttg tac ctc acc cct tgc cgc tgc tgg tgt cgg 1200  
 Leu Val Leu Ile Tyr Leu Tyr Leu Thr Pro Cys Arg Cys Trp Cys Arg  
 385 390 395 400

ggt gtg gag aaa cct tcc agc cac caa gga gat agc ctc agc tct tct 1248  
 Gly Val Glu Lys Pro Ser Ser His Gln Gly Asp Ser Leu Ser Ser Ser  
 405 410 415

atg ctc agt acc aca ccc aac cac gac cct atg gct ggt ggg gac aaa 1296  
 Met Leu Ser Thr Thr Pro Asn His Asp Pro Met Ala Gly Gly Asp Lys  
 420 425 430

gat gat ggt ttt gac cgg cgg gtg gcc ttc ctg gaa cct gct gga ccc 1344  
 Asp Asp Gly Phe Asp Arg Arg Val Ala Phe Leu Glu Pro Ala Gly Pro  
 435 440 445

ggg cag ggt caa aat ggc aaa ctc aag cca ggc aac act ctg ccg gtg 1392  
 Gly Gln Gly Gln Asn Gly Lys Leu Lys Pro Gly Asn Thr Leu Pro Val  
 450 455 460

ccc gaa gct aca ggc aag ggc caa cgg agg atg tcc gat cca gag tcg 1440  
 Pro Glu Ala Thr Gly Lys Gly Gln Arg Arg Met Ser Asp Pro Glu Ser  
 465 470 475 480

gtc agc tcg gtc ttt tct gat aca ccc att gtg gtg 1476  
 Val Ser Ser Val Phe Ser Asp Thr Pro Ile Val Val  
 485 490

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 <211> 492  
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 <213> Mus musculus

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 20 25 30  
 Ser Cys Pro Ala Asn Cys Leu Cys Ala Ser Asn Ile Leu Ser Cys Ser  
 35 40 45  
 Lys Gln Gln Leu Pro Asn Val Pro Gln Ser Leu Pro Ser Tyr Thr Ala  
 50 55 60  
 Leu Leu Asp Leu Ser His Asn Asn Leu Ser Arg Leu Arg Ala Glu Trp  
 65 70 75 80  
 Thr Pro Thr Arg Leu Thr Asn Leu His Ser Leu Leu Leu Ser His Asn  
 85 90 95  
 His Leu Asn Phe Ile Ser Ser Glu Ala Phe Val Pro Val Pro Asn Leu  
 100 105 110

Arg Tyr Leu Asp Leu Ser Ser Asn His Leu His Thr Leu Asp Glu Phe  
 115 120 125  
 Leu Phe Ser Asp Leu Gln Ala Leu Glu Val Leu Leu Leu Tyr Asn Asn  
 130 135 140  
 His Ile Val Val Val Asp Arg Asn Ala Phe Glu Asp Met Ala Gln Leu  
 145 150 155 160  
 Gln Lys Leu Tyr Leu Ser Gln Asn Gln Ile Ser Arg Phe Pro Val Glu  
 165 170 175  
 Leu Ile Lys Asp Gly Asn Lys Leu Pro Lys Leu Met Leu Leu Asp Leu  
 180 185 190  
 Ser Ser Asn Lys Leu Lys Lys Leu Pro Leu Thr Asp Leu Gln Lys Leu  
 195 200 205  
 Pro Ala Trp Val Lys Asn Gly Leu Tyr Leu His Asn Asn Pro Leu Glu  
 210 215 220  
 Cys Asp Cys Lys Leu Tyr Gln Leu Phe Ser His Trp Gln Tyr Arg Gln  
 225 230 235 240  
 Leu Ser Ser Val Met Asp Phe Gln Glu Asp Leu Tyr Cys Met His Ser  
 245 250 255  
 Lys Lys Leu His Asn Ile Phe Ser Leu Asp Phe Phe Asn Cys Ser Glu  
 260 265 270  
 Tyr Lys Glu Ser Ala Trp Glu Ala His Leu Gly Asp Thr Leu Thr Ile  
 275 280 285  
 Arg Cys Asp Thr Lys Gln Gln Gly Met Thr Lys Val Trp Val Ser Pro  
 290 295 300  
 Ser Asn Glu Gln Val Leu Ser Gln Gly Ser Asn Gly Ser Val Ser Val  
 305 310 315 320  
 Arg Asn Gly Asp Leu Phe Phe Lys Lys Val Gln Val Glu Asp Gly Gly  
 325 330 335  
 Val Tyr Thr Cys Tyr Ala Met Gly Glu Thr Phe Asn Glu Thr Leu Ser  
 340 345 350  
 Val Glu Leu Lys Val Tyr Asn Phe Thr Leu His Gly His His Asp Thr  
 355 360 365  
 Leu Asn Thr Ala Tyr Thr Thr Leu Val Gly Cys Ile Leu Ser Val Val  
 370 375 380  
 Leu Val Leu Ile Tyr Leu Tyr Leu Thr Pro Cys Arg Cys Trp Cys Arg  
 385 390 395 400  
 Gly Val Glu Lys Pro Ser Ser His Gln Gly Asp Ser Leu Ser Ser Ser  
 405 410 415

Met Leu Ser Thr Thr Pro Asn His Asp Pro Met Ala Gly Gly Asp Lys  
420 425 430

Asp Asp Gly Phe Asp Arg Arg Val Ala Phe Leu Glu Pro Ala Gly Pro  
435 440 445

Gly Gln Gly Gln Asn Gly Lys Leu Lys Pro Gly Asn Thr Leu Pro Val  
450 455 460

Pro Glu Ala Thr Gly Lys Gly Gln Arg Arg Met Ser Asp Pro Glu Ser  
465 470 475 480

Val Ser Ser Val Phe Ser Asp Thr Pro Ile Val Val  
485 490

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<211> 1557  
<212> DNA  
<213> Mus musculus

<220>  
<221> CDS  
<222> (1)..(1557)

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Met Ser Leu Arg Phe His Thr Leu Pro Thr Leu Pro Arg Ala Val Lys  
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ccg ggt tgc aga gag ctg ctg tgt ctg ttg gtg atc gca gtg atg gtg 96  
Pro Gly Cys Arg Glu Leu Leu Cys Leu Leu Val Ile Ala Val Met Val  
20 25 30

agc ccc agc gcc tca gga atg tgc ccc act gct tgc atc tgt gcc acc 144  
Ser Pro Ser Ala Ser Gly Met Cys Pro Thr Ala Cys Ile Cys Ala Thr  
35 40 45

gac att gtc agc tgc acc aac aaa aac cta tct aag gtg ccc ggg aac 192  
Asp Ile Val Ser Cys Thr Asn Lys Asn Leu Ser Lys Val Pro Gly Asn  
50 55 60

ctt ttc aga ctg att aaa aga ctg gat ctg agc tat aac aga atc gga 240  
Leu Phe Arg Leu Ile Lys Arg Leu Asp Leu Ser Tyr Asn Arg Ile Gly  
65 70 75 80

ctg ttg gat gcc gac tgg atc ccg gtg tcg ttt gtc aag ctg agc acc 288  
Leu Leu Asp Ala Asp Trp Ile Pro Val Ser Phe Val Lys Leu Ser Thr  
85 90 95

tta att ctt cgc cac aac aac atc acc agc atc tcc acg ggc agt ttc 336  
Leu Ile Leu Arg His Asn Asn Ile Thr Ser Ile Ser Thr Gly Ser Phe  
100 105 110

tcc aca acc cca aat tta aag tgt ctg gac tta tca tcc aat agg ctg 384  
Ser Thr Thr Pro Asn Leu Lys Cys Leu Asp Leu Ser Ser Asn Arg Leu

115	120	125	
aag tcg gta aag agt gcc aca ttc caa gag ctg aag gct ctg gaa gta Lys Ser Val Lys Ser Ala Thr Phe Gln Glu Leu Lys Ala Leu Glu Val 130 135 140			432
ctg ctg ctg tac aac aac cac att tcc tat ctg gac ccc gca gcg ttc Leu Leu Leu Tyr Asn Asn His Ile Ser Tyr Leu Asp Pro Ala Ala Phe 145 150 155 160			480
ggg ggg ctt tcc cac ttg cag aaa ctc tat ctg agt ggg aac ttt ctc Gly Gly Leu Ser His Leu Gln Lys Leu Tyr Leu Ser Gly Asn Phe Leu 165 170 175			528
aca cag ttc cct atg gat ttg tat act ggg agg ttc aag ctg gct gat Thr Gln Phe Pro Met Asp Leu Tyr Thr Gly Arg Phe Lys Leu Ala Asp 180 185 190			576
ctg aca ttt tta gat gtt tcc tat aat cga atc cct tcc ata ccg atg Leu Thr Phe Leu Asp Val Ser Tyr Asn Arg Ile Pro Ser Ile Pro Met 195 200 205			624
cac cat ata aac tta gtg ccg ggg aga cag ctg aga ggc atc tac ctt His His Ile Asn Leu Val Pro Gly Arg Gln Leu Arg Gly Ile Tyr Leu 210 215 220			672
cac ggg aac cca ttt gta tgt gac tgt tct ctg tac tcg ttg ctg atc His Gly Asn Pro Phe Val Cys Asp Cys Ser Leu Tyr Ser Leu Leu Ile 225 230 235 240			720
ttt tgg tac cgt agg cac ttt agc tcc gtg atg gat ttt aag aat gac Phe Trp Tyr Arg Arg His Phe Ser Ser Val Met Asp Phe Lys Asn Asp 245 250 255			768
tat acc tgt cgc ctg tgg tct gac tcc agg cac tcc cac cag ctg cag Tyr Thr Cys Arg Leu Trp Ser Asp Ser Arg His Ser His Gln Leu Gln 260 265 270			816
ctg ctc cag gag agc ttt ctg aac tgt tct tac agc gtt atc aac ggc Leu Leu Gln Glu Ser Phe Leu Asn Cys Ser Tyr Ser Val Ile Asn Gly 275 280 285			864
tcc ttc cac gca ctt ggc ttt atc cac gag gct cag gtt ggg gag agg Ser Phe His Ala Leu Gly Phe Ile His Glu Ala Gln Val Gly Glu Arg 290 295 300			912
gcg atc gtc cac tgt gac agc aag act ggc aat gga aat act gat ttc Ala Ile Val His Cys Asp Ser Lys Thr Gly Asn Gly Asn Thr Asp Phe 305 310 315 320			960
atc tgg gtc ggt ccc gat aac agg ctg ctg gag cca gat aaa gac atg Ile Trp Val Gly Pro Asp Asn Arg Leu Leu Glu Pro Asp Lys Asp Met 325 330 335			1008
ggg aac ttt cgt gtg ttt tac aac gga agt ctg gtc ata gag aac cct Gly Asn Phe Arg Val Phe Tyr Asn Gly Ser Leu Val Ile Glu Asn Pro 340 345 350			1056

ggc ttt gag gac gcc ggg gta tat tct tgt atc gca atg aac agg cag 1104  
 Gly Phe Glu Asp Ala Gly Val Tyr Ser Cys Ile Ala Met Asn Arg Gln  
 355 360 365

cgg ctg tta aac gag acg gtg gat atc atg atc aac gtg agc aat ttc 1152  
 Arg Leu Leu Asn Glu Thr Val Asp Ile Met Ile Asn Val Ser Asn Phe  
 370 375 380

acc ata aac aga tcc cac gcc cac gag gcg ttt aac acg gcc ttt acc 1200  
 Thr Ile Asn Arg Ser His Ala His Glu Ala Phe Asn Thr Ala Phe Thr  
 385 390 395 400

acc ctg gct gcc tgc gtg gcc agt ata gtt cta gtg cta ctg tat ctg 1248  
 Thr Leu Ala Ala Cys Val Ala Ser Ile Val Leu Val Leu Leu Tyr Leu  
 405 410 415

tac ctg acg ccg tgc cca tgc aaa tgc aaa gcc aag aga cag aaa aac 1296  
 Tyr Leu Thr Pro Cys Pro Cys Lys Cys Lys Ala Lys Arg Gln Lys Asn  
 420 425 430

acg ctg agc caa agc agt gcc cac tcg tcc att ctc agt cct ggc ccc 1344  
 Thr Leu Ser Gln Ser Ser Ala His Ser Ser Ile Leu Ser Pro Gly Pro  
 435 440 445

act ggc gat gcc tct gct gac gat cgg aag gca ggt aaa aga gtc gtg 1392  
 Thr Gly Asp Ala Ser Ala Asp Arg Lys Ala Gly Lys Arg Val Val  
 450 455 460

ttt ctg gag ccc ctg aag gac acg gcg gcc gga cag aat ggc aaa gtc 1440  
 Phe Leu Glu Pro Leu Lys Asp Thr Ala Ala Gly Gln Asn Gly Lys Val  
 465 470 475 480

aag ctt ttc ccc agt gag acc gtt ata gcc gag ggc atc tta aag tcc 1488  
 Lys Leu Phe Pro Ser Glu Thr Val Ile Ala Glu Gly Ile Leu Lys Ser  
 485 490 495

acc agg gca aag tct gac tca gac tca gtc aat tcc gtg ttc tca gac 1536  
 Thr Arg Ala Lys Ser Asp Ser Asp Ser Val Asn Ser Val Phe Ser Asp  
 500 505 510

aca ccc ttt gtg gca tcc act 1557  
 Thr Pro Phe Val Ala Ser Thr  
 515

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 <211> 519  
 <212> PRT  
 <213> Mus musculus

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 Pro Gly Cys Arg Glu Leu Leu Cys Leu Leu Val Ile Ala Val Met Val  
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Ser Pro Ser Ala Ser Gly Met Cys Pro Thr Ala Cys Ile Cys Ala Thr  
 35 40 45  
 Asp Ile Val Ser Cys Thr Asn Lys Asn Leu Ser Lys Val Pro Gly Asn  
 50 55 60  
 Leu Phe Arg Leu Ile Lys Arg Leu Asp Leu Ser Tyr Asn Arg Ile Gly  
 65 70 75 80  
 Leu Leu Asp Ala Asp Trp Ile Pro Val Ser Phe Val Lys Leu Ser Thr  
 85 90 95  
 Leu Ile Leu Arg His Asn Asn Ile Thr Ser Ile Ser Thr Gly Ser Phe  
 100 105 110  
 Ser Thr Thr Pro Asn Leu Lys Cys Leu Asp Leu Ser Ser Asn Arg Leu  
 115 120 125  
 Lys Ser Val Lys Ser Ala Thr Phe Gln Glu Leu Lys Ala Leu Glu Val  
 130 135 140  
 Leu Leu Leu Tyr Asn Asn His Ile Ser Tyr Leu Asp Pro Ala Ala Phe  
 145 150 155 160  
 Gly Gly Leu Ser His Leu Gln Lys Leu Tyr Leu Ser Gly Asn Phe Leu  
 165 170 175  
 Thr Gln Phe Pro Met Asp Leu Tyr Thr Gly Arg Phe Lys Leu Ala Asp  
 180 185 190  
 Leu Thr Phe Leu Asp Val Ser Tyr Asn Arg Ile Pro Ser Ile Pro Met  
 195 200 205  
 His His Ile Asn Leu Val Pro Gly Arg Gln Leu Arg Gly Ile Tyr Leu  
 210 215 220  
 His Gly Asn Pro Phe Val Cys Asp Cys Ser Leu Tyr Ser Leu Leu Ile  
 225 230 235 240  
 Phe Trp Tyr Arg Arg His Phe Ser Ser Val Met Asp Phe Lys Asn Asp  
 245 250 255  
 Tyr Thr Cys Arg Leu Trp Ser Asp Ser Arg His Ser His Gln Leu Gln  
 260 265 270  
 Leu Leu Gln Glu Ser Phe Leu Asn Cys Ser Tyr Ser Val Ile Asn Gly  
 275 280 285  
 Ser Phe His Ala Leu Gly Phe Ile His Glu Ala Gln Val Gly Glu Arg  
 290 295 300  
 Ala Ile Val His Cys Asp Ser Lys Thr Gly Asn Gly Asn Thr Asp Phe  
 305 310 315 320  
 Ile Trp Val Gly Pro Asp Asn Arg Leu Leu Glu Pro Asp Lys Asp Met  
 325 330 335

Gly Asn Phe Arg Val Phe Tyr Asn Gly Ser Leu Val Ile Glu Asn Pro  
 340 345 350  
 Gly Phe Glu Asp Ala Gly Val Tyr Ser Cys Ile Ala Met Asn Arg Gln  
 355 360 365  
 Arg Leu Leu Asn Glu Thr Val Asp Ile Met Ile Asn Val Ser Asn Phe  
 370 375 380  
 Thr Ile Asn Arg Ser His Ala His Glu Ala Phe Asn Thr Ala Phe Thr  
 385 390 395 400  
 Thr Leu Ala Ala Cys Val Ala Ser Ile Val Leu Val Leu Leu Tyr Leu  
 405 410 415  
 Tyr Leu Thr Pro Cys Pro Cys Lys Cys Lys Ala Lys Arg Gln Lys Asn  
 420 425 430  
 Thr Leu Ser Gln Ser Ser Ala His Ser Ser Ile Leu Ser Pro Gly Pro  
 435 440 445  
 Thr Gly Asp Ala Ser Ala Asp Asp Arg Lys Ala Gly Lys Arg Val Val  
 450 455 460  
 Phe Leu Glu Pro Leu Lys Asp Thr Ala Ala Gly Gln Asn Gly Lys Val  
 465 470 475 480  
 Lys Leu Phe Pro Ser Glu Thr Val Ile Ala Glu Gly Ile Leu Lys Ser  
 485 490 495  
 Thr Arg Ala Lys Ser Asp Ser Asp Ser Val Asn Ser Val Phe Ser Asp  
 500 505 510  
 Thr Pro Phe Val Ala Ser Thr  
 515

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 <211> 1524  
 <212> DNA  
 <213> Mus musculus

<220>  
 <221> CDS  
 <222> (1)..(1524)

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 Met Ala Trp Leu Val Leu Ser Gly Ile Leu Leu Cys Met Leu Gly Ala  
 1 5 10 15  
 gga ttg ggc act tca gac ttg gag gat gtt ctg cct cct gct ccc cac 96  
 Gly Leu Gly Thr Ser Asp Leu Glu Asp Val Leu Pro Pro Ala Pro His  
 20 25 30

aac tgc ccc gat ata tgc atc tgt gct gcc gat gtg ttg agc tgt gcg	144
Asn Cys Pro Asp Ile Cys Ile Cys Ala Ala Asp Val Leu Ser Cys Ala	
35 40 45	
ggc cgt ggg tta cag gac ttg ccg gta gca ctg cct acc act gct gca	192
Gly Arg Gly Leu Gln Asp Leu Pro Val Ala Leu Pro Thr Thr Ala Ala	
50 55 60	
gaa ctc gat ttg agc cac aac gca ctc aaa cgc ctg cac ccg ggg tgg	240
Glu Leu Asp Leu Ser His Asn Ala Leu Lys Arg Leu His Pro Gly Trp	
65 70 75 80	
tta gcg ccc ctc tcc cgg ctg cgt gcc ttg cac cta ggc tat aat aag	288
Leu Ala Pro Leu Ser Arg Leu Arg Ala Leu His Leu Gly Tyr Asn Lys	
85 90 95	
ctg gaa gtc ctg ggc cat ggt gcg ttc acc aat gcc agt ggc ctg agg	336
Leu Glu Val Leu Gly His Gly Ala Phe Thr Asn Ala Ser Gly Leu Arg	
100 105 110	
aca ctt gac ctg tcc tct aat atg tta agg atg ctc cat acc cat gac	384
Thr Leu Asp Leu Ser Ser Asn Met Leu Arg Met Leu His Thr His Asp	
115 120 125	
ctg gat ggc ctg gag gag ctg gag aag tta ctt ctg ttc aat aac agc	432
Leu Asp Gly Leu Glu Glu Leu Glu Lys Leu Leu Leu Phe Asn Asn Ser	
130 135 140	
ctg atg cac ttg gac ctg gat gcc ttc cag ggc ctg cgc atg ctt agc	480
Leu Met His Leu Asp Leu Asp Ala Phe Gln Gly Leu Arg Met Leu Ser	
145 150 155 160	
cac ctc tat ctc agc tgc aac gag ctc tcc tct ttc tct ttc aac cac	528
His Leu Tyr Leu Ser Cys Asn Glu Leu Ser Ser Phe Ser Phe Asn His	
165 170 175	
ttg cac ggt ctg ggg tta acc cgc ctg cgg act ctg gac ctc tcc tcc	576
Leu His Gly Leu Gly Leu Thr Arg Leu Arg Thr Leu Asp Leu Ser Ser	
180 185 190	
aac tgg ctg aaa cat atc tcc atc cct gag ttg gct gca ctg cca act	624
Asn Trp Leu Lys His Ile Ser Ile Pro Glu Leu Ala Ala Leu Pro Thr	
195 200 205	
tat ctc aag aac agg ctc tac ctg cac aac aac ccg ctg ccc tgt gac	672
Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn Asn Pro Leu Pro Cys Asp	
210 215 220	
tgc agc ctc tac cac ctg ctc cgg cgc tgg cac cag cgg ggc ctg agt	720
Cys Ser Leu Tyr His Leu Leu Arg Arg Trp His Gln Arg Gly Leu Ser	
225 230 235 240	
gcc ctg cat gat ttt gaa cgc gag tac aca tgc ttg gtc ttt aag gtg	768
Ala Leu His Asp Phe Glu Arg Glu Tyr Thr Cys Leu Val Phe Lys Val	
245 250 255	
tca gag tcc cga gtg cgc ttt ttt gag cac agc cgg gtc ttc aag aac	816

Ser	Glu	Ser	Arg	Val	Arg	Phe	Phe	Glu	His	Ser	Arg	Val	Phe	Lys	Asn	
			260					265					270			
tgc	tct	gtg	gct	gca	gct	cca	ggc	tta	gag	ctg	cct	gaa	gag	cag	ctg	864
Cys	Ser	Val	Ala	Ala	Ala	Pro	Gly	Leu	Glu	Leu	Pro	Glu	Glu	Gln	Leu	
		275					280					285				
cac	gcg	cag	gtg	ggc	cag	tcc	ctg	agg	ctc	ttc	tgc	aac	acc	agt	gtg	912
His	Ala	Gln	Val	Gly	Gln	Ser	Leu	Arg	Leu	Phe	Cys	Asn	Thr	Ser	Val	
	290					295					300					
cct	gcc	act	cgg	gtg	gcc	tgg	gtc	tcc	ccg	aag	aat	gag	ctg	ctt	gtg	960
Pro	Ala	Thr	Arg	Val	Ala	Trp	Val	Ser	Pro	Lys	Asn	Glu	Leu	Leu	Val	
305					310					315					320	
gcg	cca	gcc	tct	cag	gat	ggc	agc	atc	gct	gtg	ttg	gct	gat	ggc	agc	1008
Ala	Pro	Ala	Ser	Gln	Asp	Gly	Ser	Ile	Ala	Val	Leu	Ala	Asp	Gly	Ser	
				325				330						335		
tta	gcc	ata	ggc	agg	gtg	caa	gag	cag	cac	gca	ggc	gtc	ttt	gtg	tgc	1056
Leu	Ala	Ile	Gly	Arg	Val	Gln	Glu	Gln	His	Ala	Gly	Val	Phe	Val	Cys	
			340					345					350			
ctg	gcc	agt	ggg	ccc	cgc	ctg	cac	cac	aac	cag	aca	ctt	gag	tac	aat	1104
Leu	Ala	Ser	Gly	Pro	Arg	Leu	His	His	Asn	Gln	Thr	Leu	Glu	Tyr	Asn	
		355					360					365				
gtg	agt	gtg	caa	aag	gct	cgc	ccc	gag	cca	gag	act	ttc	aac	aca	ggc	1152
Val	Ser	Val	Gln	Lys	Ala	Arg	Pro	Glu	Pro	Glu	Thr	Phe	Asn	Thr	Gly	
	370					375					380					
ttt	acc	acc	ctg	ctg	ggc	tgt	att	gtg	ggc	ctg	gtg	ctg	gtg	ttg	ctc	1200
Phe	Thr	Thr	Leu	Leu	Gly	Cys	Ile	Val	Gly	Leu	Val	Leu	Val	Leu	Leu	
385					390				395						400	
tac	ttg	ttt	gca	cca	ccc	tgt	cgt	ggc	tgc	tgt	cac	tgc	tgt	cag	cgg	1248
Tyr	Leu	Phe	Ala	Pro	Pro	Cys	Arg	Gly	Cys	Cys	His	Cys	Cys	Gln	Arg	
				405				410						415		
gcc	tgc	cgc	aac	cgt	tgc	tgg	ccc	cgg	gca	tcc	agt	cca	ctc	cag	gag	1296
Ala	Cys	Arg	Asn	Arg	Cys	Trp	Pro	Arg	Ala	Ser	Ser	Pro	Leu	Gln	Glu	
			420					425					430			
ctg	agc	gca	cag	tcc	tcc	atg	ctc	agc	act	acg	cca	cca	gat	gca	ccc	1344
Leu	Ser	Ala	Gln	Ser	Ser	Met	Leu	Ser	Thr	Thr	Pro	Pro	Asp	Ala	Pro	
		435					440					445				
agc	cgc	aag	gcc	agt	gtc	cac	aag	cat	gtg	gtc	ttc	ctg	gag	ccg	ggc	1392
Ser	Arg	Lys	Ala	Ser	Val	His	Lys	His	Val	Val	Phe	Leu	Glu	Pro	Gly	
	450					455					460					
aag	aag	ggc	ctc	aat	ggc	cgt	gtg	cag	ctc	gca	gta	gct	gaa	gac	ttc	1440
Lys	Lys	Gly	Leu	Asn	Gly	Arg	Val	Gln	Leu	Ala	Val	Ala	Glu	Asp	Phe	
465					470				475						480	
gat	ctg	tgc	aac	ccc	atg	ggc	ttg	caa	ctc	aag	gct	ggc	tct	gaa	tca	1488
Asp	Leu	Cys	Asn	Pro	Met	Gly	Leu	Gln	Leu	Lys	Ala	Gly	Ser	Glu	Ser	

	485		490		495	
gcc agt tcc acg ggc tca gag ggt ctc gtg atg agc						1524
Ala Ser Ser Thr Gly Ser Glu Gly Leu Val Met Ser						
	500		505			
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<213> Mus musculus						
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Met Ala Trp Leu Val Leu Ser Gly Ile Leu Leu Cys Met Leu Gly Ala						
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Gly Leu Gly Thr Ser Asp Leu Glu Asp Val Leu Pro Pro Ala Pro His						
	20		25		30	
Asn Cys Pro Asp Ile Cys Ile Cys Ala Ala Asp Val Leu Ser Cys Ala						
	35		40		45	
Gly Arg Gly Leu Gln Asp Leu Pro Val Ala Leu Pro Thr Thr Ala Ala						
	50		55		60	
Glu Leu Asp Leu Ser His Asn Ala Leu Lys Arg Leu His Pro Gly Trp						
	65		70		75	80
Leu Ala Pro Leu Ser Arg Leu Arg Ala Leu His Leu Gly Tyr Asn Lys						
	85		90		95	
Leu Glu Val Leu Gly His Gly Ala Phe Thr Asn Ala Ser Gly Leu Arg						
	100		105		110	
Thr Leu Asp Leu Ser Ser Asn Met Leu Arg Met Leu His Thr His Asp						
	115		120		125	
Leu Asp Gly Leu Glu Glu Leu Glu Lys Leu Leu Leu Phe Asn Asn Ser						
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Leu Met His Leu Asp Leu Asp Ala Phe Gln Gly Leu Arg Met Leu Ser						
	145		150		155	160
His Leu Tyr Leu Ser Cys Asn Glu Leu Ser Ser Phe Ser Phe Asn His						
	165		170		175	
Leu His Gly Leu Gly Leu Thr Arg Leu Arg Thr Leu Asp Leu Ser Ser						
	180		185		190	
Asn Trp Leu Lys His Ile Ser Ile Pro Glu Leu Ala Ala Leu Pro Thr						
	195		200		205	
Tyr Leu Lys Asn Arg Leu Tyr Leu His Asn Asn Pro Leu Pro Cys Asp						
	210		215		220	
Cys Ser Leu Tyr His Leu Leu Arg Arg Trp His Gln Arg Gly Leu Ser						
	225		230		235	240

Ala Leu His Asp Phe Glu Arg Glu Tyr Thr Cys Leu Val Phe Lys Val  
 245 250 255  
 Ser Glu Ser Arg Val Arg Phe Phe Glu His Ser Arg Val Phe Lys Asn  
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 Cys Ser Val Ala Ala Ala Pro Gly Leu Glu Leu Pro Glu Glu Gln Leu  
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 His Ala Gln Val Gly Gln Ser Leu Arg Leu Phe Cys Asn Thr Ser Val  
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 Pro Ala Thr Arg Val Ala Trp Val Ser Pro Lys Asn Glu Leu Leu Val  
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 Ala Pro Ala Ser Gln Asp Gly Ser Ile Ala Val Leu Ala Asp Gly Ser  
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 Leu Ala Ser Gly Pro Arg Leu His His Asn Gln Thr Leu Glu Tyr Asn  
 355 360 365  
 Val Ser Val Gln Lys Ala Arg Pro Glu Pro Glu Thr Phe Asn Thr Gly  
 370 375 380  
 Phe Thr Thr Leu Leu Gly Cys Ile Val Gly Leu Val Leu Val Leu Leu  
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 405 410 415  
 Ala Cys Arg Asn Arg Cys Trp Pro Arg Ala Ser Ser Pro Leu Gln Glu  
 420 425 430  
 Leu Ser Ala Gln Ser Ser Met Leu Ser Thr Thr Pro Pro Asp Ala Pro  
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 Ser Arg Lys Ala Ser Val His Lys His Val Val Phe Leu Glu Pro Gly  
 450 455 460  
 Lys Lys Gly Leu Asn Gly Arg Val Gln Leu Ala Val Ala Glu Asp Phe  
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Met	Arg	Pro	Ser	Gly	Thr	Ala	Gly	Ala	Ala	Leu	Leu	Ala	Leu	Leu	Ala	
1				5				10						15		

gcg	ctc	tgc	ccg	gcg	agt	cgg	gct	ctg	gag	gaa	aag	aaa	gtt	tgc	caa	96
Ala	Leu	Cys	Pro	Ala	Ser	Arg	Ala	Leu	Glu	Glu	Lys	Lys	Val	Cys	Gln	
			20					25					30			

ggc	acg	agt	aac	aag	ctc	acg	cag	ttg	ggc	act	ttt	gaa	gat	cat	ttt	144
Gly	Thr	Ser	Asn	Lys	Leu	Thr	Gln	Leu	Gly	Thr	Phe	Glu	Asp	His	Phe	
		35					40				45					

ctc	agc	ctc	cag	agg	atg	ttc	aat	aac	tgt	gag	gtg	gtc	ctt	ggg	aat	192
Leu	Ser	Leu	Gln	Arg	Met	Phe	Asn	Asn	Cys	Glu	Val	Val	Leu	Gly	Asn	
	50					55					60					

ttg	gaa	att	acc	tat	gtg	cag	agg	aat	tat	gat	ctt	tcc	ttc	tta	aag	240
Leu	Glu	Ile	Thr	Tyr	Val	Gln	Arg	Asn	Tyr	Asp	Leu	Ser	Phe	Leu	Lys	
65					70				75					80		

acc	atc	cag	gag	gtg	gct	ggt	tat	gtc	ctc	att	gcc	ctc	aac	aca	gtg	288
Thr	Ile	Gln	Glu	Val	Ala	Gly	Tyr	Val	Leu	Ile	Ala	Leu	Asn	Thr	Val	
			85					90						95		

gag	cga	att	cct	ttg	gaa	aac	ctg	cag	atc	atc	aga	gga	aat	atg	tac	336
Glu	Arg	Ile	Pro	Leu	Glu	Asn	Leu	Gln	Ile	Ile	Arg	Gly	Asn	Met	Tyr	
			100					105					110			

tac	gaa	aat	tcc	tat	gcc	tta	gca	gtc	tta	tct	aac	tat	gat	gca	aat	384
Tyr	Glu	Asn	Ser	Tyr	Ala	Leu	Ala	Val	Leu	Ser	Asn	Tyr	Asp	Ala	Asn	
		115					120					125				

aaa	acc	gga	ctg	aag	gag	ctg	ccc	atg	aga	aat	tta	cag	gaa	atc	ctg	432
Lys	Thr	Gly	Leu	Lys	Glu	Leu	Pro	Met	Arg	Asn	Leu	Gln	Glu	Ile	Leu	
	130					135					140					

cat	ggc	gcc	gtg	cgg	ttc	agc	aac	aac	cct	gcc	ctg	tgc	aac	gtg	gag	480
His	Gly	Ala	Val	Arg	Phe	Ser	Asn	Asn	Pro	Ala	Leu	Cys	Asn	Val	Glu	
145					150					155					160	

agc	atc	cag	tgg	cgg	gac	ata	gtc	agc	agt	gac	ttt	ctc	agc	aac	atg	528
Ser	Ile	Gln	Trp	Arg	Asp	Ile	Val	Ser	Ser	Asp	Phe	Leu	Ser	Asn	Met	
				165				170						175		

tcg	atg	gac	ttc	cag	aac	cac	ctg	ggc	agc	tgc	caa	aag	tgt	gat	cca	576
Ser	Met	Asp	Phe	Gln	Asn	His	Leu	Gly	Ser	Cys	Gln	Lys	Cys	Asp	Pro	
			180					185					190			

agc	tgt	ccc	aat	ggg	agc	tgc	tgg	ggt	gca	gga	gag	gag	aac	tgc	cag	624
Ser	Cys	Pro	Asn	Gly	Ser	Cys	Trp	Gly	Ala	Gly	Glu	Glu	Asn	Cys	Gln	

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aaa ctg acc aaa atc atc tgt gcc cag cag tgc tcc ggg cgc tgc cgt Lys Leu Thr Lys Ile Ile Cys Ala Gln Gln Cys Ser Gly Arg Cys Arg 210 215 220			672
ggc aag tcc ccc agt gac tgc tgc cac aac cag tgt gct gca ggc tgc Gly Lys Ser Pro Ser Asp Cys Cys His Asn Gln Cys Ala Ala Gly Cys 225 230 235 240			720
aca ggc ccc cgg gag agc gac tgc ctg gtc tgc cgc aaa ttc cga gac Thr Gly Pro Arg Glu Ser Asp Cys Leu Val Cys Arg Lys Phe Arg Asp 245 250 255			768
gaa gcc acg tgc aag gac acc tgc ccc cca ctc atg ctc tac aac ccc Glu Ala Thr Cys Lys Asp Thr Cys Pro Pro Leu Met Leu Tyr Asn Pro 260 265 270			816
acc acg tac cag atg gat gtg aac ccc gag ggc aaa tac agc ttt ggt Thr Thr Tyr Gln Met Asp Val Asn Pro Glu Gly Lys Tyr Ser Phe Gly 275 280 285			864
gcc acc tgc gtg aag aag tgt ccc cgt aat tat gtg gtg aca gat cac Ala Thr Cys Val Lys Lys Cys Pro Arg Asn Tyr Val Val Thr Asp His 290 295 300			912
ggc tcg tgc gtc cga gcc tgt ggg gcc gac agc tat gag atg gag gaa Gly Ser Cys Val Arg Ala Cys Gly Ala Asp Ser Tyr Glu Met Glu Glu 305 310 315 320			960
gac ggc gtc cgc aag tgt aag aag tgc gaa ggg cct tgc cgc aaa gtg Asp Gly Val Arg Lys Cys Lys Lys Cys Glu Gly Pro Cys Arg Lys Val 325 330 335			1008
tgt aac gga ata ggt att ggt gaa ttt aaa gac tca ctc tcc ata aat Cys Asn Gly Ile Gly Ile Gly Glu Phe Lys Asp Ser Leu Ser Ile Asn 340 345 350			1056
gct acg aat att aaa cac ttc aaa aac tgc acc tcc atc agt ggc gat Ala Thr Asn Ile Lys His Phe Lys Asn Cys Thr Ser Ile Ser Gly Asp 355 360 365			1104
ctc cac atc ctg ccg gtg gca ttt agg ggt gac tcc ttc aca cat act Leu His Ile Leu Pro Val Ala Phe Arg Gly Asp Ser Phe Thr His Thr 370 375 380			1152
cct cct ctg gat cca cag gaa ctg gat att ctg aaa acc gta aag gaa Pro Pro Leu Asp Pro Gln Glu Leu Asp Ile Leu Lys Thr Val Lys Glu 385 390 395 400			1200
atc aca ggg ttt ttg ctg att cag gct tgg cct gaa aac agg acg gac Ile Thr Gly Phe Leu Leu Ile Gln Ala Trp Pro Glu Asn Arg Thr Asp 405 410 415			1248
ctc cat gcc ttt gag aac cta gaa atc ata cgc ggc agg acc aag caa Leu His Ala Phe Glu Asn Leu Glu Ile Ile Arg Gly Arg Thr Lys Gln 420 425 430			1296



cat ggt cag ttt tct ctt gca gtc gtc agc ctg aac ata aca tcc ttg	1344
His Gly Gln Phe Ser Leu Ala Val Val Ser Leu Asn Ile Thr Ser Leu	
435 440 445	
gga tta cgc tcc ctc aag gag ata agt gat gga gat gtg ata att tca	1392
Gly Leu Arg Ser Leu Lys Glu Ile Ser Asp Gly Asp Val Ile Ile Ser	
450 455 460	
gga aac aaa aat ttg tgc tat gca aat aca ata aac tgg aaa aaa ctg	1440
Gly Asn Lys Asn Leu Cys Tyr Ala Asn Thr Ile Asn Trp Lys Lys Leu	
465 470 475 480	
ttt ggg acc tcc ggt cag aaa acc aaa att ata agc aac aga ggt gaa	1488
Phe Gly Thr Ser Gly Gln Lys Thr Lys Ile Ile Ser Asn Arg Gly Glu	
485 490 495	
aac agc tgc aag gcc aca ggc cag gtc tgc cat gcc ttg tgc tcc ccc	1536
Asn Ser Cys Lys Ala Thr Gly Gln Val Cys His Ala Leu Cys Ser Pro	
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Glu Gly Cys Trp Gly Pro Glu Pro Arg Asp Cys Val Ser Cys Arg Asn	
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Val Ser Arg Gly Arg Glu Cys Val Asp Lys Cys Asn Leu Leu Glu Gly	
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gag cca agg gag ttt gtg gag aac tct gag tgc ata cag tgc cac cca	1680
Glu Pro Arg Glu Phe Val Glu Asn Ser Glu Cys Ile Gln Cys His Pro	
545 550 555 560	
gag tgc ctg cct cag gcc atg aac atc acc tgc aca gga cgg gga cca	1728
Glu Cys Leu Pro Gln Ala Met Asn Ile Thr Cys Thr Gly Arg Gly Pro	
565 570 575	
gac aac tgt atc cag tgt gcc cac tac att gac ggc ccc cac tgc gtc	1776
Asp Asn Cys Ile Gln Cys Ala His Tyr Ile Asp Gly Pro His Cys Val	
580 585 590	
aag acc tgc ccg gca gga gtc atg gga gaa aac aac acc ctg gtc tgg	1824
Lys Thr Cys Pro Ala Gly Val Met Gly Glu Asn Asn Thr Leu Val Trp	
595 600 605	
aag tac gca gac gcc ggc cat gtg tgc cac ctg tgc cat cca aac tgc	1872
Lys Tyr Ala Asp Ala Gly His Val Cys His Leu Cys His Pro Asn Cys	
610 615 620	
acc tac gga tgc act ggg cca ggt ctt gaa ggc tgt cca acg aat ggg	1920
Thr Tyr Gly Cys Thr Gly Pro Gly Leu Glu Gly Cys Pro Thr Asn Gly	
625 630 635 640	
cct aag atc ccg tcc atc gcc act ggg atg gtg ggg gcc ctc ctc ttg	1968
Pro Lys Ile Pro Ser Ile Ala Thr Gly Met Val Gly Ala Leu Leu Leu	
645 650 655	

ctg ctg gtg gtg gcc ctg ggg atc ggc ctc ttc atg cga agg cgc cac	2016
Leu Leu Val Val Ala Leu Gly Ile Gly Leu Phe Met Arg Arg Arg His	
660 665 670	
atc gtt cgg aag cgc acg ctg cgg agg ctg ctg cag gag agg gag ctt	2064
Ile Val Arg Lys Arg Thr Leu Arg Arg Leu Leu Gln Glu Arg Glu Leu	
675 680 685	
gtg gag cct ctt aca ccc agt gga gaa gct ccc aac caa gct ctc ttg	2112
Val Glu Ala Pro Leu Thr Pro Ser Gly Glu Ala Pro Asn Gln Ala Leu Leu	
690 695 700	
agg atc ttg aag gaa act gaa ttc aaa aag atc aaa gtg ctg ggc tcc	2160
Arg Ile Leu Lys Glu Thr Glu Phe Lys Lys Ile Lys Val Leu Gly Ser	
705 710 715 720	
ggt gcg ttc ggc acg gtg tat aag gga ctc tgg atc cca gaa ggt gag	2208
Gly Ala Phe Gly Thr Val Tyr Lys Gly Leu Trp Ile Pro Glu Gly Glu	
725 730 735	
aaa gtt aaa att ccc gtc gct atc aag gaa tta aga gaa gca aca tct	2256
Lys Val Lys Ile Pro Val Ala Ile Lys Glu Leu Arg Glu Ala Thr Ser	
740 745 750	
ccg aaa gcc aac aag gaa atc ctc gat gaa gcc tac gtg atg gcc agc	2304
Pro Lys Ala Asn Lys Glu Ile Leu Asp Glu Ala Tyr Val Met Ala Ser	
755 760 765	
gtg gac aac ccc cac gtg tgc cgc ctg ctg ggc atc tgc ctc acc tcc	2352
Val Asp Asn Pro His Val Cys Arg Leu Leu Gly Ile Cys Leu Thr Ser	
770 775 780	
acc gtg cag ctc atc acg cag ctc atg ccc ttc ggc tgc ctc ctg gac	2400
Thr Val Gln Leu Ile Thr Gln Leu Met Pro Phe Gly Cys Leu Leu Asp	
785 790 795 800	
tat gtc cgg gaa cac aaa gac aat att ggc tcc cag tac ctg ctc aac	2448
Tyr Val Arg Glu His Lys Asp Asn Ile Gly Ser Gln Tyr Leu Leu Asn	
805 810 815	
tgg tgt gtg cag atc gca aag ggc atg aac tac ttg gag gac cgt cgc	2496
Trp Cys Val Gln Ile Ala Lys Gly Met Asn Tyr Leu Glu Asp Arg Arg	
820 825 830	
ttg gtg cac cgc gac ctg gca gcc agg aac gta ctg gtg aaa aca ccg	2544
Leu Val His Arg Asp Leu Ala Ala Arg Asn Val Leu Val Lys Thr Pro	
835 840 845	
cag cat gtc aag atc aca gat ttt ggg ctg gcc aaa ctg ctg ggt gcg	2592
Gln His Val Lys Ile Thr Asp Phe Gly Leu Ala Lys Leu Leu Gly Ala	
850 855 860	
gaa gag aaa gaa tac cat gca gaa gga ggc aaa gtg cct atc aag tgg	2640
Glu Glu Lys Glu Tyr His Ala Glu Gly Gly Lys Val Pro Ile Lys Trp	
865 870 875 880	
atg gca ttg gaa tca att tta cac aga atc tat acc cac cag agt gat	2688

Met	Ala	Leu	Glu	Ser	Ile	Leu	His	Arg	Ile	Tyr	Thr	His	Gln	Ser	Asp	
				885					890					895		
gtc	tgg	agc	tac	ggg	gtg	acc	gtt	tgg	gag	ttg	atg	acc	ttt	gga	tcc	2736
Val	Trp	Ser	Tyr	Gly	Val	Thr	Val	Trp	Glu	Leu	Met	Thr	Phe	Gly	Ser	
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aag	cca	tat	gac	gga	atc	cct	gcc	agc	gag	atc	tcc	tcc	atc	ctg	gag	2784
Lys	Pro	Tyr	Asp	Gly	Ile	Pro	Ala	Ser	Glu	Ile	Ser	Ser	Ile	Leu	Glu	
		915					920					925				
aaa	gga	gaa	cgc	ctc	cct	cag	cca	ccc	ata	tgt	acc	atc	gat	gtc	tac	2832
Lys	Gly	Glu	Arg	Leu	Pro	Gln	Pro	Pro	Ile	Cys	Thr	Ile	Asp	Val	Tyr	
	930					935					940					
atg	atc	atg	gtc	aag	tgc	tgg	atg	ata	gac	gca	gat	agt	cgc	cca	aag	2880
Met	Ile	Met	Val	Lys	Cys	Trp	Met	Ile	Asp	Ala	Asp	Ser	Arg	Pro	Lys	
945					950				955						960	
ttc	cgt	gag	ttg	atc	atc	gaa	ttc	tcc	aaa	atg	gcc	cga	gac	ccc	cag	2928
Phe	Arg	Glu	Leu	Ile	Ile	Glu	Phe	Ser	Lys	Met	Ala	Arg	Asp	Pro	Gln	
			965					970						975		
cgc	tac	ctt	gtc	att	cag	ggg	gat	gaa	aga	atg	cat	ttg	cca	agt	cct	2976
Arg	Tyr	Leu	Val	Ile	Gln	Gly	Asp	Glu	Arg	Met	His	Leu	Pro	Ser	Pro	
		980						985					990			
aca	gac	tcc	aac	ttc	tac	cgt	gcc	ctg	atg	gat	gaa	gaa	gac	atg	gac	3024
Thr	Asp	Ser	Asn	Phe	Tyr	Arg	Ala	Leu	Met	Asp	Glu	Glu	Asp	Met	Asp	
		995					1000				1005					
gac	gtg	gtg	gat	gcc	gac	gag	tac	ctc	atc	cca	cag	cag	ggc	ttc	ttc	3072
Asp	Val	Val	Asp	Ala	Asp	Glu	Tyr	Leu	Ile	Pro	Gln	Gln	Gly	Phe	Phe	
	1010					1015				1020						
agc	agc	ccc	tcc	acg	tca	cgg	act	ccc	ctc	ctg	agc	tct	ctg	agt	gca	3120
Ser	Ser	Pro	Ser	Thr	Ser	Arg	Thr	Pro	Leu	Leu	Ser	Ser	Leu	Ser	Ala	
1025				1030				1035					1040			
acc	agc	aac	aat	tcc	acc	gtg	gct	tgc	att	gat	aga	aat	ggg	ctg	caa	3168
Thr	Ser	Asn	Asn	Ser	Thr	Val	Ala	Cys	Ile	Asp	Arg	Asn	Gly	Leu	Gln	
		1045						1050					1055			
agc	tgt	ccc	atc	aag	gaa	gac	agc	ttc	ttg	cag	cga	tac	agc	tca	gac	3216
Ser	Cys	Pro	Ile	Lys	Glu	Asp	Ser	Phe	Leu	Gln	Arg	Tyr	Ser	Ser	Asp	
		1060					1065					1070				
ccc	aca	ggc	gcc	ttg	act	gag	gac	agc	ata	gac	gac	acc	ttc	ctc	cca	3264
Pro	Thr	Gly	Ala	Leu	Thr	Glu	Asp	Ser	Ile	Asp	Asp	Thr	Phe	Leu	Pro	
	1075					1080					1085					
gtg	cct	gaa	tac	ata	aac	cag	tcc	gtt	ccc	aaa	agg	ccc	gct	ggc	tct	3312
Val	Pro	Glu	Tyr	Ile	Asn	Gln	Ser	Val	Pro	Lys	Arg	Pro	Ala	Gly	Ser	
	1090					1095				1100						
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Val	Gln	Asn	Pro	Val	Tyr	His	Asn	Gln	Pro	Leu	Asn	Pro	Ala	Pro	Ser	

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Arg Asp Pro His Tyr	Gln Asp Pro His Ser Thr	Ala Val Gly Asn Pro		
1125	1130	1135		
gag tat ctc aac act	gtc cag ccc acc tgt gtc	aac agc aca ttc gac		3456
Glu Tyr Leu Asn Thr	Val Gln Pro Thr Cys	Val Asn Ser Thr Phe	Asp	
1140	1145	1150		
agc cct gcc cac tgg	gcc cag aaa ggc agc	cac caa att agc ctg	gac	3504
Ser Pro Ala His Trp	Ala Gln Lys Gly Ser	His Gln Ile Ser Leu	Asp	
1155	1160	1165		
aac cct gac tac cag	cag gac ttc ttt ccc	aag gaa gcc aag cca	aat	3552
Asn Pro Asp Tyr Gln	Gln Asp Phe Phe Pro	Lys Glu Ala Lys Pro	Asn	
1170	1175	1180		
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Gly Ile Phe Lys Gly	Ser Thr Ala Glu Asn	Ala Glu Tyr Leu Arg	Val	
1185	1190	1195	1200	
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Ala Pro Gln Ser Ser	Glu Phe Ile Gly Ala			
1205	1210			

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Leu Glu Ile Thr Tyr Val Gln Arg Asn Tyr Asp Leu Ser Phe Leu Lys	
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Thr Ile Gln Glu Val Ala Gly Tyr Val Leu Ile Ala Leu Asn Thr Val	
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Glu Arg Ile Pro Leu Glu Asn Leu Gln Ile Ile Arg Gly Asn Met Tyr  
 100 105 110

Tyr Glu Asn Ser Tyr Ala Leu Ala Val Leu Ser Asn Tyr Asp Ala Asn  
 115 120 125

Lys Thr Gly Leu Lys Glu Leu Pro Met Arg Asn Leu Gln Glu Ile Leu  
 130 135 140

His Gly Ala Val Arg Phe Ser Asn Asn Pro Ala Leu Cys Asn Val Glu  
 145 150 155 160

Ser Ile Gln Trp Arg Asp Ile Val Ser Ser Asp Phe Leu Ser Asn Met  
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Ser Met Asp Phe Gln Asn His Leu Gly Ser Cys Gln Lys Cys Asp Pro  
 180 185 190

Ser Cys Pro Asn Gly Ser Cys Trp Gly Ala Gly Glu Glu Asn Cys Gln  
 195 200 205

Lys Leu Thr Lys Ile Ile Cys Ala Gln Gln Cys Ser Gly Arg Cys Arg  
 210 215 220

Gly Lys Ser Pro Ser Asp Cys Cys His Asn Gln Cys Ala Ala Gly Cys  
 225 230 235 240

Thr Gly Pro Arg Glu Ser Asp Cys Leu Val Cys Arg Lys Phe Arg Asp  
 245 250 255

Glu Ala Thr Cys Lys Asp Thr Cys Pro Pro Leu Met Leu Tyr Asn Pro  
 260 265 270

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 275 280 285

Ala Thr Cys Val Lys Lys Cys Pro Arg Asn Tyr Val Val Thr Asp His  
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Gly Ser Cys Val Arg Ala Cys Gly Ala Asp Ser Tyr Glu Met Glu Glu  
 305 310 315 320

Asp Gly Val Arg Lys Cys Lys Lys Cys Glu Gly Pro Cys Arg Lys Val  
 325 330 335

Cys Asn Gly Ile Gly Ile Gly Glu Phe Lys Asp Ser Leu Ser Ile Asn  
 340 345 350

Ala Thr Asn Ile Lys His Phe Lys Asn Cys Thr Ser Ile Ser Gly Asp  
 355 360 365

Leu His Ile Leu Pro Val Ala Phe Arg Gly Asp Ser Phe Thr His Thr  
 370 375 380

Pro Pro Leu Asp Pro Gln Glu Leu Asp Ile Leu Lys Thr Val Lys Glu  
 385 390 395 400

Ile Thr Gly Phe Leu Leu Ile Gln Ala Trp Pro Glu Asn Arg Thr Asp  
 405 410 415

Leu His Ala Phe Glu Asn Leu Glu Ile Ile Arg Gly Arg Thr Lys Gln  
 420 425 430

His Gly Gln Phe Ser Leu Ala Val Val Ser Leu Asn Ile Thr Ser Leu  
 435 440 445

Gly Leu Arg Ser Leu Lys Glu Ile Ser Asp Gly Asp Val Ile Ile Ser  
 450 455 460

Gly Asn Lys Asn Leu Cys Tyr Ala Asn Thr Ile Asn Trp Lys Lys Leu  
 465 470 475 480

Phe Gly Thr Ser Gly Gln Lys Thr Lys Ile Ile Ser Asn Arg Gly Glu  
 485 490 495

Asn Ser Cys Lys Ala Thr Gly Gln Val Cys His Ala Leu Cys Ser Pro  
 500 505 510

Glu Gly Cys Trp Gly Pro Glu Pro Arg Asp Cys Val Ser Cys Arg Asn  
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Val Ser Arg Gly Arg Glu Cys Val Asp Lys Cys Asn Leu Leu Glu Gly  
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Glu Pro Arg Glu Phe Val Glu Asn Ser Glu Cys Ile Gln Cys His Pro

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Glu Cys Leu Pro	Gln Ala Met Asn Ile Thr Cys Thr Gly Arg Gly Pro	565	570	575		
Asp Asn Cys Ile	Gln Cys Ala His Tyr Ile Asp Gly Pro His Cys Val	580	585	590		
Lys Thr Cys Pro	Ala Gly Val Met Gly Glu Asn Asn Thr Leu Val Trp	595	600	605		
Lys Tyr Ala Asp	Ala Gly His Val Cys His Leu Cys His Pro Asn Cys	610	615	620		
Thr Tyr Gly Cys	Thr Gly Pro Gly Leu Glu Gly Cys Pro Thr Asn Gly	625	630	635	640	
Pro Lys Ile Pro	Ser Ile Ala Thr Gly Met Val Gly Ala Leu Leu Leu	645	650	655		
Leu Leu Val Val	Ala Leu Gly Ile Gly Leu Phe Met Arg Arg Arg His	660	665	670		
Ile Val Arg Lys	Arg Thr Leu Arg Arg Leu Leu Gln Glu Arg Glu Leu	675	680	685		
Val Glu Pro Leu	Thr Pro Ser Gly Glu Ala Pro Asn Gln Ala Leu Leu	690	695	700		
Arg Ile Leu Lys	Glu Thr Glu Phe Lys Lys Ile Lys Val Leu Gly Ser	705	710	715	720	
Gly Ala Phe Gly	Thr Val Tyr Lys Gly Leu Trp Ile Pro Glu Gly Glu	725	730	735		
Lys Val Lys Ile	Pro Val Ala Ile Lys Glu Leu Arg Glu Ala Thr Ser	740	745	750		
Pro Lys Ala Asn	Lys Glu Ile Leu Asp Glu Ala Tyr Val Met Ala Ser	755	760	765		
Val Asp Asn Pro	His Val Cys Arg Leu Leu Gly Ile Cys Leu Thr Ser	770	775	780		

Thr Val Gln Leu Ile Thr Gln Leu Met Pro Phe Gly Cys Leu Leu Asp  
 785 790 795 800

Tyr Val Arg Glu His Lys Asp Asn Ile Gly Ser Gln Tyr Leu Leu Asn  
 805 810 815

Trp Cys Val Gln Ile Ala Lys Gly Met Asn Tyr Leu Glu Asp Arg Arg  
 820 825 830

Leu Val His Arg Asp Leu Ala Ala Arg Asn Val Leu Val Lys Thr Pro  
 835 840 845

Gln His Val Lys Ile Thr Asp Phe Gly Leu Ala Lys Leu Leu Gly Ala  
 850 855 860

Glu Glu Lys Glu Tyr His Ala Glu Gly Gly Lys Val Pro Ile Lys Trp  
 865 870 875 880

Met Ala Leu Glu Ser Ile Leu His Arg Ile Tyr Thr His Gln Ser Asp  
 885 890 895

Val Trp Ser Tyr Gly Val Thr Val Trp Glu Leu Met Thr Phe Gly Ser  
 900 905 910

Lys Pro Tyr Asp Gly Ile Pro Ala Ser Glu Ile Ser Ser Ile Leu Glu  
 915 920 925

Lys Gly Glu Arg Leu Pro Gln Pro Pro Ile Cys Thr Ile Asp Val Tyr  
 930 935 940

Met Ile Met Val Lys Cys Trp Met Ile Asp Ala Asp Ser Arg Pro Lys  
 945 950 955 960

Phe Arg Glu Leu Ile Ile Glu Phe Ser Lys Met Ala Arg Asp Pro Gln  
 965 970 975

Arg Tyr Leu Val Ile Gln Gly Asp Glu Arg Met His Leu Pro Ser Pro  
 980 985 990

Thr Asp Ser Asn Phe Tyr Arg Ala Leu Met Asp Glu Glu Asp Met Asp  
 995 1000 1005



Asp	Val	Val	Asp	Ala	Asp	Glu	Tyr	Leu	Ile	Pro	Gln	Gln	Gly	Phe
1010						1015					1020			
Phe	Ser	Ser	Pro	Ser	Thr	Ser	Arg	Thr	Pro	Leu	Leu	Ser	Ser	Leu
1025						1030					1035			
Ser	Ala	Thr	Ser	Asn	Asn	Ser	Thr	Val	Ala	Cys	Ile	Asp	Arg	Asn
1040						1045					1050			
Gly	Leu	Gln	Ser	Cys	Pro	Ile	Lys	Glu	Asp	Ser	Phe	Leu	Gln	Arg
1055						1060					1065			
Tyr	Ser	Ser	Asp	Pro	Thr	Gly	Ala	Leu	Thr	Glu	Asp	Ser	Ile	Asp
1070						1075					1080			
Asp	Thr	Phe	Leu	Pro	Val	Pro	Glu	Tyr	Ile	Asn	Gln	Ser	Val	Pro
1085						1090					1095			
Lys	Arg	Pro	Ala	Gly	Ser	Val	Gln	Asn	Pro	Val	Tyr	His	Asn	Gln
1100						1105					1110			
Pro	Leu	Asn	Pro	Ala	Pro	Ser	Arg	Asp	Pro	His	Tyr	Gln	Asp	Pro
1115						1120					1125			
His	Ser	Thr	Ala	Val	Gly	Asn	Pro	Glu	Tyr	Leu	Asn	Thr	Val	Gln
1130						1135					1140			
Pro	Thr	Cys	Val	Asn	Ser	Thr	Phe	Asp	Ser	Pro	Ala	His	Trp	Ala
1145						1150					1155			
Gln	Lys	Gly	Ser	His	Gln	Ile	Ser	Leu	Asp	Asn	Pro	Asp	Tyr	Gln
1160						1165					1170			
Gln	Asp	Phe	Phe	Pro	Lys	Glu	Ala	Lys	Pro	Asn	Gly	Ile	Phe	Lys
1175						1180					1185			
Gly	Ser	Thr	Ala	Glu	Asn	Ala	Glu	Tyr	Leu	Arg	Val	Ala	Pro	Gln
1190						1195					1200			
Ser	Ser	Glu	Phe	Ile	Gly	Ala								
1205						1210								



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Val Arg Phe Ser Asn Asn Pro Ala Leu Cys Asn Val Glu Ser Ile Gln	
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Trp Arg Asp Ile Val Ser Ser Asp Phe Leu Ser Asn Met Ser Met Asp	
165 170 175	
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Phe Gln Asn His Leu Gly Ser Cys Gln Lys Cys Asp Pro Ser Cys Pro	
180 185 190 195	
aat ggg agc tgc tgg ggt gca gga gag gag aac tgc cag aaa ctg acc	799
Asn Gly Ser Cys Trp Gly Ala Gly Glu Glu Asn Cys Gln Lys Leu Thr	
200 205 210	
aaa atc atc tgt gcc cag cag tgc tcc ggg cgc tgc cgt ggc aag tcc	847
Lys Ile Ile Cys Ala Gln Gln Cys Ser Gly Arg Cys Arg Gly Lys Ser	
215 220 225	
ccc agt gac tgc tgc cac aac cag tgt gct gca ggc tgc aca ggc ccc	895
Pro Ser Asp Cys Cys His Asn Gln Cys Ala Ala Gly Cys Thr Gly Pro	
230 235 240	
cgg gag agc gac tgc ctg gtc tgc cgc aaa ttc cga gac gaa gcc acg	943
Arg Glu Ser Asp Cys Leu Val Cys Arg Lys Phe Arg Asp Glu Ala Thr	
245 250 255	
tgc aag gac acc tgc ccc cca ctc atg ctc tac aac ccc acc acg tac	991
Cys Lys Asp Thr Cys Pro Pro Leu Met Leu Tyr Asn Pro Thr Thr Tyr	
260 265 270 275	
cag atg gat gtg aac ccc gag ggc aaa tac agc ttt ggt gcc acc tgc	1039
Gln Met Asp Val Asn Pro Glu Gly Lys Tyr Ser Phe Gly Ala Thr Cys	
280 285 290	
gtg aag aag tgt ccc cgt aat tat gtg gtg aca gat cac ggc tcg tgc	1087
Val Lys Lys Cys Pro Arg Asn Tyr Val Val Thr Asp His Gly Ser Cys	
295 300 305	
gtc cga gcc tgt ggg gcc gac agc tat gag atg gag gaa gac ggc gtc	1135
Val Arg Ala Cys Gly Ala Asp Ser Tyr Glu Met Glu Glu Asp Gly Val	
310 315 320	
cgc aag tgt aag aag tgc gaa ggg cct tgc cgc aaa gtg tgt aac gga	1183
Arg Lys Cys Lys Lys Cys Glu Gly Pro Cys Arg Lys Val Cys Asn Gly	
325 330 335	
ata ggt att ggt gaa ttt aaa gac tca ctc tcc ata aat gct acg aat	1231
Ile Gly Ile Gly Glu Phe Lys Asp Ser Leu Ser Ile Asn Ala Thr Asn	
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att aaa cac ttc aaa aac tgc acc tcc atc agt ggc gat ctc cac atc	1279
Ile Lys His Phe Lys Asn Cys Thr Ser Ile Ser Gly Asp Leu His Ile	
360 365 370	

ctg ccg gtg gca ttt agg ggt gac tcc ttc aca cat act cct cct ctg	1327
Leu Pro Val Ala Phe Arg Gly Asp Ser Phe Thr His Thr Pro Pro Leu	
375 380 385	
gat cca cag gaa ctg gat att ctg aaa acc gta aag gaa atc aca ggg	1375
Asp Pro Gln Glu Leu Asp Ile Leu Lys Thr Val Lys Glu Ile Thr Gly	
390 395 400	
ttt ttg ctg att cag gct tgg cct gaa aac agg acg gac ctc cat gcc	1423
Phe Leu Leu Ile Gln Ala Trp Pro Glu Asn Arg Thr Asp Leu His Ala	
405 410 415	
ttt gag aac cta gaa atc ata cgc ggc agg acc aag caa cat ggt cag	1471
Phe Glu Asn Leu Glu Ile Ile Arg Gly Arg Thr Lys Gln His Gly Gln	
420 425 430 435	
ttt tct ctt gca gtc gtc agc ctg aac ata aca tcc ttg gga tta cgc	1519
Phe Ser Leu Ala Val Val Ser Leu Asn Ile Thr Ser Leu Gly Leu Arg	
440 445 450	
tcc ctc aag gag ata agt gat gga gat gtg ata att tca gga aac aaa	1567
Ser Leu Lys Glu Ile Ser Asp Gly Asp Val Ile Ile Ser Gly Asn Lys	
455 460 465	
aat ttg tgc tat gca aat aca ata aac tgg aaa aaa ctg ttt ggg acc	1615
Asn Leu Cys Tyr Ala Asn Thr Ile Asn Trp Lys Lys Leu Phe Gly Thr	
470 475 480	
tcc ggt cag aaa acc aaa att ata agc aac aga ggt gaa aac agc tgc	1663
Ser Gly Gln Lys Thr Lys Ile Ile Ser Asn Arg Gly Glu Asn Ser Cys	
485 490 495	
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Lys Ala Thr Gly Gln Val Cys His Ala Leu Cys Ser Pro Glu Gly Cys	
500 505 510 515	
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Trp Gly Pro Glu Pro Arg Asp Cys Val Ser Cys Arg Asn Val Ser Arg	
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ggc agg gaa tgc gtg gac aag tgc aac ctt ctg gag ggt gag cca agg	1807
Gly Arg Glu Cys Val Asp Lys Cys Asn Leu Leu Glu Gly Glu Pro Arg	
535 540 545	
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Glu Phe Val Glu Asn Ser Glu Cys Ile Gln Cys His Pro Glu Cys Leu	
550 555 560	
cct cag gcc atg aac atc acc tgc aca gga cgg gga cca gac aac tgt	1903
Pro Gln Ala Met Asn Ile Thr Cys Thr Gly Arg Gly Pro Asp Asn Cys	
565 570 575	
atc cag tgt gcc cac tac att gac ggc ccc cac tgc gtc aag acc tgc	1951
Ile Gln Cys Ala His Tyr Ile Asp Gly Pro His Cys Val Lys Thr Cys	
580 585 590 595	
ccg gca gga gtc atg gga gaa aac aac acc ctg gtc tgg aag tac gca	1999

Pro	Ala	Gly	Val	Met	Gly	Glu	Asn	Asn	Thr	Leu	Val	Trp	Lys	Tyr	Ala		
				600					605						610		
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Asp	Ala	Gly	His	Val	Cys	His	Leu	Cys	His	Pro	Asn	Cys	Thr	Tyr	Gly		
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tgc	act	ggg	cca	ggg	ctt	gaa	ggc	tgt	cca	acg	aat	ggg	cct	aag	atc	2095	
Cys	Thr		Pro	Gly	Leu	Glu	Gly	Cys	Pro	Thr	Asn	Gly	Pro	Lys	Ile		
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ccg	tcc	atc	gcc	act	ggg	atg	gtg	ggg	gcc	ctc	ctc	ttg	ctg	ctg	gtg	2143	
Pro	Ser	Ile	Ala	Thr	Gly	Met	Val	Gly	Ala	Leu	Leu	Leu	Leu	Leu	Val		
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gtg	gcc	ctg	ggg	atc	ggc	ctc	ttc	atg	cga	agg	cgc	cac	atc	gtt	cgg	2191	
Val	Ala	Leu	Gly	Ile	Gly	Leu	Phe	Met	Arg	Arg	Arg	His	Ile	Val	Arg		
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Lys	Arg	Thr	Leu	Arg	Arg	Leu	Leu	Gln	Glu	Arg	Glu	Leu	Val	Glu	Pro		
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ctt	aca	ccc	agt	gga	gaa	gct	ccc	aac	caa	gct	ctc	ttg	agg	atc	ttg	2287	
Leu	Thr	Pro	Ser	Gly	Glu	Ala	Pro	Asn	Gln	Ala	Leu	Leu	Arg	Ile	Leu		
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Gly	Thr	Val	Tyr	Lys	Gly	Leu	Trp	Ile	Pro	Glu	Gly	Glu	Lys	Val	Lys		
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att	ccc	gtc	gct	atc	aag	gaa	tta	aga	gaa	gca	aca	tct	ccg	aaa	gcc	2431	
Ile	Pro	Val	Ala	Ile	Lys	Glu	Leu	Arg	Glu	Ala	Thr	Ser	Pro	Lys	Ala		
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aac	aag	gaa	atc	ctc	gat	gaa	gcc	tac	gtg	atg	gcc	agc	gtg	gac	aac	2479	
Asn	Lys	Glu	Ile	Leu	Asp	Glu	Ala	Tyr	Val	Met	Ala	Ser	Val	Asp	Asn		
				760					765					770			
ccc	cac	gtg	tgc	cgc	ctg	ctg	ggc	atc	tgc	ctc	acc	tcc	acc	gtg	cag	2527	
Pro	His	Val	Cys	Arg	Leu	Leu	Gly	Ile	Cys	Leu	Thr	Ser	Thr	Val	Gln		
			775					780					785				
ctc	atc	acg	cag	ctc	atg	ccc	ttc	ggc	tgc	ctc	ctg	gac	tat	gtc	cgg	2575	
Leu	Ile	Thr	Gln	Leu	Met	Pro	Phe	Gly	Cys	Leu	Leu	Asp	Tyr	Val	Arg		
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gaa	cac	aaa	gac	aat	att	ggc	tcc	cag	tac	ctg	ctc	aac	tgg	tgt	gtg	2623	
Glu	His	Lys	Asp	Asn	Ile	Gly	Ser	Gln	Tyr	Leu	Leu	Asn	Trp	Cys	Val		
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cag	atc	gca	aag	ggc	atg	aac	tac	ttg	gag	gac	cgt	cgc	ttg	gtg	cac	2671	
Gln	Ile	Ala	Lys	Gly	Met	Asn	Tyr	Leu	Glu	Asp	Arg	Arg	Leu	Val	His		

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cgc gac ctg gca gcc agg aac gta ctg gtg aaa aca ccg cag cat gtc				2719
Arg Asp Leu Ala Ala Arg Asn Val Leu Val Lys Thr Pro Gln His Val				
	840	845	850	
aag atc aca gat ttt ggg ctg gcc aaa ctg ctg ggt gcg gaa gag aaa				2767
Lys Ile Thr Asp Phe Gly Leu Ala Lys Leu Leu Gly Ala Glu Glu Lys				
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gaa tac cat gca gaa gga ggc aaa gtg cct atc aag tgg atg gca ttg				2815
Glu Tyr His Ala Glu Gly Gly Lys Val Pro Ile Lys Trp Met Ala Leu				
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gaa tca att tta cac aga atc tat acc cac cag agt gat gtc tgg agc				2863
Glu Ser Ile Leu His Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser				
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Tyr Gly Val Thr Val Trp Glu Leu Met Thr Phe Gly Ser Lys Pro Tyr				
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gac gga atc cct gcc agc gag atc tcc tcc atc ctg gag aaa gga gaa				2959
Asp Gly Ile Pro Ala Ser Glu Ile Ser Ser Ile Leu Glu Lys Gly Glu				
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cgc ctc cct cag cca ccc ata tgt acc atc gat gtc tac atg atc atg				3007
Arg Leu Pro Gln Pro Pro Ile Cys Thr Ile Asp Val Tyr Met Ile Met				
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Val Lys Cys Trp Met Ile Asp Ala Asp Ser Arg Pro Lys Phe Arg Glu				
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Leu Ile Ile Glu Phe Ser Lys Met Ala Arg Asp Pro Gln Arg Tyr Leu				
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Val Ile Gln Gly Asp Glu Arg Met His Leu Pro Ser Pro Thr Asp Ser				
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Asn Phe Tyr Arg Ala Leu Met Asp Glu Glu Asp Met Asp Asp Val Val				
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Asp Ala Asp Glu Tyr Leu Ile Pro Gln Gln Gly Phe Phe Ser Ser Pro				
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Ser Thr Ser Arg Thr Pro Leu Leu Ser Ser Leu Ser Ala Thr Ser Asn				
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Asn Ser Thr Val Ala Cys Ile Asp Arg Asn Gly Leu Gln Ser Cys Pro				
	1045	1050	1055	

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 1080 1085 1090

tac ata aac cag tcc gtt ccc aaa agg ccc gct ggc tct gtg cag aat 3487  
 Tyr Ile Asn Gln Ser Val Pro Lys Arg Pro Ala Gly Ser Val Gln Asn  
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 Pro Val Tyr His Asn Gln Pro Leu Asn Pro Ala Pro Ser Arg Asp Pro  
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 His Tyr Gln Asp Pro His Ser Thr Ala Val Gly Asn Pro Glu Tyr Leu  
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Leu	Ser	Leu	Gln	Arg	Met	Phe	Asn	Asn	Cys	Glu	Val	Val	Leu	Gly	Asn		
	50					55					60						
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Thr	Ile	Gln	Glu	Val	Ala	Gly	Tyr	Val	Leu	Ile	Ala	Leu	Asn	Thr	Val		
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Glu	Arg	Ile	Pro	Leu	Glu	Asn	Leu	Gln	Ile	Ile	Arg	Gly	Asn	Met	Tyr		
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Tyr	Glu	Asn	Ser	Tyr	Ala	Leu	Ala	Val	Leu	Ser	Asn	Tyr	Asp	Ala	Asn		
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Lys	Thr	Gly	Leu	Lys	Glu	Leu	Pro	Met	Arg	Asn	Leu	Gln	Glu	Ile	Leu		
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His	Gly	Ala	Val	Arg	Phe	Ser	Asn	Asn	Pro	Ala	Leu	Cys	Asn	Val	Glu		
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Ser	Ile	Gln	Trp	Arg	Asp	Ile	Val	Ser	Ser	Asp	Phe	Leu	Ser	Asn	Met		
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Ser	Met	Asp	Phe	Gln	Asn	His	Leu	Gly	Ser	Cys	Gln	Lys	Cys	Asp	Pro		
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Ser	Cys	Pro	Asn	Gly	Ser	Cys	Trp	Gly	Ala	Gly	Glu	Glu	Asn	Cys	Gln		
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Glu Leu Ile Leu Glu Phe Ser Lys Met Ala Arg Asp Pro Gln Arg Tyr	
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Leu Val Ile Gln Gly Asp Glu Arg Met His Leu Pro Ser Pro Thr Asp	
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Ser Asn Phe Tyr Arg Ala Leu Met Asp Glu Glu Asp Met Glu Asp Val	
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Val Asp Ala Asp Glu Tyr Leu Thr Pro Gln Gln Gly Phe Phe Asn Ser	
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Pro Ser Thr Ser Arg Thr Pro Leu Leu Ser Ser Leu Ser Ala Thr Ser	
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Asn Asn Ser Thr Val Ala Cys Ile Asn Arg Asn Gly Ser Cys Arg Val	
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Lys Glu Asp Ala Phe Leu Gln Arg Tyr Ser Ser Asp Pro Thr Gly Ala	
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Val Thr Glu Asp Asn Ile Asp Asp Ala Phe Leu Pro Val Pro Glu Tyr	
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Val Asn Gln Ser Val Pro Lys Arg Pro Ala Gly Ser Val Gln Asn Pro	
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Val Tyr His Asn Gln Pro Leu His Pro Ala Pro Gly Arg Asp Leu His	
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Tyr Gln Asn Pro His Ser Asn Ala Val Gly Asn Pro Glu Tyr Leu Asn  
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act gcc cag cct acc tgt ctc agt agt ggg ttt aac agc cct gca ctc      3691  
 Thr Ala Gln Pro Thr Cys Leu Ser Ser Gly Phe Asn Ser Pro Ala Leu  
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 Trp Ile Gln Lys Gly Ser His Gln Met Ser Leu Asp Asn Pro Asp Tyr  
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 Gln Gln Asp Phe Phe Pro Lys Glu Thr Lys Pro Asn Gly Ile Phe Lys  
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ggc ccc aca gct gaa aat gca gag tac cta cgg gtg gca cct cca agc      3835  
 Gly Pro Thr Ala Glu Asn Ala Glu Tyr Leu Arg Val Ala Pro Pro Ser  
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 Ser Glu Phe Ile Gly Ala  
 1205                                      1210

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 Leu Glu Ile Thr Tyr Val Gln Arg Asn Tyr Asp Leu Ser Phe Leu Lys  
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Glu Cys Leu Pro Gln Ala Met Asn Ile Thr Cys Thr Gly Arg Gly Pro				
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Asp Asn Cys Ile Gln Cys Ala His Tyr Ile Asp Gly Pro His Cys Val				
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Lys Thr Cys Pro Ala Gly Ile Met Gly Glu Asn Asn Thr Leu Val Trp				
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Lys Tyr Ala Asp Ala Asn Asn Val Cys His Leu Cys His Ala Asn Cys				
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Thr Tyr Gly Cys Ala Gly Pro Gly Leu Gln Gly Cys Glu Val Trp Pro				
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Ser Gly Pro Lys Ile Pro Ser Ile Ala Thr Gly Ile Val Gly Gly Leu				
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Arg His Ile Val Arg Lys Arg Thr Leu Arg Arg Leu Leu Gln Glu Arg				
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His Leu Arg Ile Leu Lys Glu Thr Glu Phe Lys Lys Ile Lys Val Leu				
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Pro Lys Phe Arg Glu Leu Ile Leu Glu Phe Ser Lys Met Ala Arg Asp				
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Pro Gln Arg Tyr Leu Val Ile Gln Gly Asp Glu Arg Met His Leu Pro				
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Met Leu Leu Thr Leu Ile Ile Leu Leu Pro															10
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Val Val Ser Lys Phe Ser Phe Val Ser Leu Ser Ala Pro Gln His Trp															25
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Ser Cys Pro Glu Gly Thr Leu Ala Gly Asn Gly Asn Ser Thr Cys Val															40
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Gly Pro Ala Pro Phe Leu Ile Phe Ser His Gly Asn Ser Ile Phe Arg															55
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Ile Asp Thr Glu Gly Thr Asn Tyr Glu Gln Leu Val Val Asp Ala Gly															70
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Val Ser Val Ile Met Asp Phe His Tyr Asn Glu Lys Arg Ile Tyr Trp															90
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Thr Ala Val Ser Leu Asp Val Leu Asp Lys Arg Leu Phe Trp Ile Gln															215

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His Pro Leu Ala Gln Pro Lys Ala Glu Asp Asp Thr Trp Glu Pro Glu	
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Phe	His	Tyr	Asn	Glu	Lys	Arg	Ile	Tyr	Trp	Val	Asp	Leu	Glu	Arg	Gln	85	90	95	
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Glu	Val	Ile	Trp	Ser	Asn	Gln	Gln	Glu	Gly	Ile	Ile	Thr	Val	Thr	Asp	130	135	140	
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Ala	Asn	Val	Ala	Val	Asp	Pro	Val	Glu	Arg	Phe	Ile	Phe	Trp	Ser	Ser	165	170	175	
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Cys	Pro	Arg	Asn	Val	Ser	Glu	Cys	Ser	His	Asp	Cys	Val	Leu	Thr	Ser	405	410	415	
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35 40 45  
Asp Ser His Thr Gln Phe Cys Phe His Gly Thr Cys Arg Phe Leu Val  
50 55 60  
Gln Glu Asp Lys Pro Ala Cys Val Cys His Ser Gly Tyr Val Gly Ala  
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Arg Cys Glu His Ala Asp Leu Leu Ala Val Val Ala Ala Ser Gln Lys  
85 90 95  
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100 105 110  
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<213> Mus musculus

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 Leu Ile Ile Thr Cys Val Leu Ile His Cys Cys Gln Leu Arg Lys His  
                             115                            120                            125  
 Cys Glu Trp Cys Arg Ala Leu Val Cys Arg His Glu Lys Pro Ser Ala  
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<210> 33

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<212> PRT

<213> Unknown

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Lys Asn Asp Phe Ala Gly Leu Lys Gln Leu Arg Val Leu Gln Leu Met  
                             20                            25                            30

Glu Asn Gln Ile Gly Ala Val Glu Arg Gly Ala Phe Asp Asp Met Lys  
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Glu Leu Glu Arg Leu Arg Leu Asn Arg Asn Gln Leu His Met Leu Pro  
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Glu Leu Leu Phe Gln Asn Asn Gln Ala Leu Ser Arg Leu Asp Leu Ser  
 65                            70                            75                            80

Glu Asn Ala Ile Gln Ala Ile Pro Arg Lys Ala Phe Arg Gly Ala Thr  
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Asp Leu Lys Asn Leu Arg Leu Asp Lys Asn Gln Ile Ser Cys Ile Glu  
                             100                            105                            110

Glu Gly Ala Phe Arg Ala Leu Arg Gly Leu Glu Val Leu Thr Leu Asn  
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Asn Asn Asn Ile Thr Thr Ile Pro Val Ser Ser Phe Asn His Met Pro  
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<210> 34  
 <211> 120  
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 <223> Mammalian Slit1\_LRRs2 amino acid sequence from Fig.11

<400> 34

Thr Met Thr Glu Ile Arg Leu Glu Leu Asn Gly Ile Lys Ser Ile Pro  
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Pro Gly Ala Phe Ser Pro Tyr Arg Lys Leu Arg Arg Ile Asp Leu Ser  
 20 25 30

Asn Asn Gln Ile Ala Glu Ile Ala Pro Asp Ala Phe Gln Gly Leu Arg  
 35 40 45

Ser Leu Asn Ser Leu Val Leu Tyr Gly Asn Lys Ile Thr Asp Leu Pro  
 50 55 60

Arg Gly Val Phe Gly Gly Leu Tyr Thr Leu Gln Leu Leu Leu Leu Asn  
 65 70 75 80

Ala Asn Lys Ile Asn Cys Ile Arg Pro Asp Ala Phe Gln Asp Leu Gln  
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Asn Leu Ser Leu Leu Ser Leu Tyr Asp Asn Lys Ile Gln Ser Leu Ala  
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Lys Gly Thr Phe Thr Ser Leu Arg  
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<210> 35  
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 <213> Unknown

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His Leu Lys Lys Ile Asn Leu Ser Asn Asn Lys Val Ser Glu Ile Glu



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Asp Gly Ala Phe Glu Gly Ala Ala Ser Val Ser Glu Leu His Leu Thr  
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Ala Asn Gln Leu Glu Ser Ile Arg Ser Gly Met Phe Arg Gly Leu Asp  
                   35                  40                  45

Gly Leu Arg Thr Leu Met Leu Arg Asn Asn Arg Ile Ser Cys Ile His  
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Asn Asp Ser Phe Thr Gly Leu Arg Asn Val Arg Leu Leu Ser Leu Tyr  
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Asn Ser Ser Phe Thr Asn Met Ser Gln Leu Thr Thr Leu Ile Leu Ser  
                   20                  25                  30

Tyr Asn Ala Leu Gln Cys Ile Pro Pro Leu Ala Phe Gln Gly Leu Arg  
           35                  40                  45

Ser Leu Arg Leu Leu Ser Leu His Gly Asn Asp Ile Ser Thr Leu Gln  
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Asp Arg Cys Gly Leu Gln Glu Leu Gly Pro Gly Leu Phe Arg Gly Leu  
35 40 45

Ala Ala Leu Gln Tyr Leu Tyr Leu Gln Asp Asn Ala Leu Gln Ala Leu  
50 55 60

Pro Asp Asp Thr Phe Arg Asp Leu Gly Asn Leu Thr His Leu Phe Leu  
65 70 75 80

His Gly Asn Arg Ile Ser Ser Val Pro Glu Arg Ala Phe Arg Gly Leu  
85 90 95

His Ser Leu Asp Arg Leu Leu Leu His Gln Asn Arg Val Ala His Val  
100 105 110

His Pro His Ala Phe Arg Asp Leu Gly Arg Leu Met Thr Leu Tyr Leu  
115 120 125

Phe Ala Asn Asn Leu Ser Ala Leu Pro Thr Glu Ala Leu Ala Pro Leu  
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Arg  
145

<210> 38

<211> 148

<212> PRT

<213> Homo sapiens

<220>

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<223> AMIGO amino acid sequence from Fig.11

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Ser His Asn His Leu Asn Phe Ile Ser Ser Glu Ala Phe Ser Pro Val  
 35 40 45

Pro Asn Leu Arg Tyr Leu Asp Leu Ser Ser Asn Gln Leu Arg Thr Leu  
 50 55 60

Asp Glu Phe Leu Phe Ser Asp Leu Gln Val Leu Glu Val Leu Leu Leu  
 65 70 75 80

Tyr Asn Asn His Ile Met Ala Val Asp Arg Cys Ala Phe Asp Asp Met  
 85 90 95

Ala Gln Leu Gln Lys Leu Tyr Leu Ser Gln Asn Gln Ile Ser Arg Phe  
 100 105 110

Pro Leu Glu Leu Val Lys Glu Gly Ala Lys Leu Pro Lys Leu Thr Leu  
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Leu Asp Leu Ser Ser Asn Lys Leu Lys Asn Leu Pro Leu Pro Asp Leu  
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<210> 39  
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20 25 30

Xaa Asn Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa Xaa Leu Xaa  
35 40 45

Xaa Leu Xaa Xaa Leu Xaa Leu Xaa Xaa Asn Xaa Leu Xaa Xaa Xaa Xaa



50		55		60
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65	70	75	80	
Asn Xaa Leu Xaa Xaa	Xaa Xaa Xaa Xaa	Xaa Xaa Phe Xaa	Xaa Leu Xaa	
	85	90	95	
Xaa Leu Xaa Xaa Leu	Xaa Leu Xaa Xaa	Asn Xaa Leu Xaa	Xaa Xaa Xaa	
	100	105	110	
Xaa Xaa Xaa Phe Xaa	Xaa Leu Xaa Xaa	Leu Xaa Xaa Leu	Xaa	
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Cys	Xaa	Xaa	Leu	Xaa	Xaa	Xaa	Leu	Xaa	Xaa	Xaa	Xaa
			20				25				

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 1 5 10 15

Xaa Xaa Xaa